

THE MAKING OF A QUALITY IMPROVEMENT TEAM IN A COMMUNITY
HEALTH CENTRE: WHAT DOES IT TAKE?

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Abstract

The purpose of this study was to use Bronfenbrenner's ecological model of development to explore how a quality improvement (QI) team within a Community Health Centre (CHC) identifies the elements that have led to its success. This was a single case study, which took place in an Ontario Community Health Centre. The study included the reflection of a key manager who was also the researcher in this project. In addition, the study included 6 individual interviews with QI team members. Five themes emerged: (1) supportive management, (2) safe spaces, (3) ability to embrace collective change, (4) signs of success, and (5) collaborative environment. This study suggests that these five themes outline a strategy for successfully implementing QI in a primary care environment.

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Chapter 1- Introduction

Canadian health care is under increasing pressure to become cost effective while also needing to improve the quality of services. Quality improvement strategies, tools and techniques have become the predominant approaches driving change within the sector (Hebert et al., 2011). The Ministry of Health and Long Term Care (MOHLTC), through its Excellent Care for All Act (ECFAA), has mandated health organizations to improve the delivery of health care in the province (Matthews, 2010). Health Quality Ontario (HQO), created in 2005, is a government agency given the responsibility for the quality of health care by: (a) monitoring and reporting on access to publicly funded health services, resource allocation, population health status and health outcomes, (b) supporting continuous quality improvement and (c) promoting health care that is supported by the best available scientific evidence by delivering a yearly report to the MOHLTC on the state of the health system in Ontario (Health Quality Ontario, 2012).

There are a number of drivers that are at work within the broadest context that are influencing healthcare to move toward this focus on improvement. Global and national research agendas that address the burden of chronic illness both a care and financial burden perspective. As medical research learns more about the root cause of disease along with its prevention and management there is an increased pressure to improve worldwide health services (Longo, et al., 2006) This also includes a particular focus on the cost burden of health care expenditures and the focus on keeping rising health care costs in check and, ultimately, focusing on cost effectiveness (Lukas et al., 2007) . Finally, there is a pressure from the public who are demanding accountability from their health care system while, at the same time, are focused on an improved experience while receiving their care (Matthews, 2010).

Over the past five years, new practices and policies have been mandated for organizations in relation to quality such as quality improvement plans (QIPs), patient relations processes, and quality improvement councils. These requirements began in the hospital sector and have subsequently moved to long term care, family health teams (FHTs) and community health centres (CHCs). Yet, little is known as to how organizations are working to embed these quality improvement initiatives in to their practice settings. Most implementation science research in this area of embedding changes related to quality stems from the hospital environment (Lukas et al., 2007). An extensive search resulted in no research having been done in community based primary care settings. Of particular interest in this study is how individuals in the CHC primary care model have embedded these mandates within their local community based context.

This chapter will explore the history of CHCs in Ontario together with the recent emphasis on quality improvement (QI) in health care. It will outline one CHC's recent journey with QI which will allow for an understanding of the case chosen for this project.

History of Community Health Centres in Ontario

Tommy Douglas, known as the father of Medicare in Canada (Association of Ontario Health Centres, 2008) famously stated at the beginning of the 20th century, "Let us not forget the ultimate goal of Medicare is to keep people well" (Association of Ontario Health Centres, 2008). With that statement, the CHC movement began. Forty years later, the first CHCs created a primary care model that would focus on keeping people well rather than just treating them when they were ill. In the 1970s, CHCs were experimental pilot projects under Premier Davis and moved to the mainstream of health care in 1982 under Health Minister Grossman (Association of Ontario Health Centres, 2005). Today there are over 75 CHCs in Ontario. CHCs are non-profit, community-governed organizations that provide primary care, health promotion and community development services using interprofessional teams of health providers including

physicians, nurse practitioners, registered nurses, dietitians, health promoters, counsellors and others who are salaried rather than fee-for-service (Association of Ontario Health Centres, 2008). CHCs are focused on removing barriers to health care including poverty, isolation, racism, sexism, ableism or any other form of social exclusion (Association of Ontario Health Centres, 2008).

CHC Model of Care

CHCs are based in an innovative model of care that includes eight specific characteristics (Association of Ontario Health Centres, 2008). CHCs are community governed by local boards that work with the assistance of advisory committees to respond to the needs of their respective communities giving them a sense of ownership over local health care needs. CHC care ensures comprehensive care through coordinated navigation of, not only their particular primary care system, but the broader health care system such as hospitals, physiotherapy, specialists and support services. CHCs are designed to be accessible to all, taking into account their particular location, their facilities and what additional supports they need to achieve their health goals including the services of counselling, dietitian or outreach worker support. CHCs are client-centred which means being sensitive to the needs of those accessing their services and taking into consideration client and patient feedback (Association of Ontario Health Centres, 2008).

Additionally, interprofessional teams are at the core of CHCs, focusing on collaborative practice by salaried professionals in order to provide multi-faceted care. CHCs also strive to provide integrated care with its partners such as Community Care Access Centres (CCAC), Public Health (PH), physician specialists in the healthcare system and with other social service partners in the community to assist with better referrals and advocacy (Association of Ontario Health Centres, 2008). CHCs are guided by the social determinants of health understanding that there are numerous social

factors that affect health outcomes including income, shelter, education, food and social justice (Association of Ontario Health Centres, 2008). It is through this lens that CHCs approach all areas of an individual's life that impact their overall health. Finally, CHCs are grounded in a community development approach that addresses the broader concerns of the community such as food access or lack of dental coverage (Association of Ontario Health Centres, 2008).

Expansion of CHCs in Ontario

In 2004 and 2005, the Liberal provincial government announced the expansion of CHCs with 49 new centres across Ontario including three new CHCs in Niagara (Association of Ontario Health Centres, 2011). The goal of this expansion was to double the number of people served by CHCs from 500,000 in 2004 to one million by 2020 (Association of Ontario Health Centres, 2009). Currently, the CHC model is the only primary care model in Ontario under the funding structure of the Local Health Integration Networks (LHINs). Ontario created 14 LHINs in 2005, with the mandate to plan, fund and integrate health care services for more efficient care in their regions (Born and Sullivan, 2013). In addition, LHINs are also responsible for enforcing accountability for CHC funds through a Multi-Sector Accountability Agreement (MSAA) which is the accountability mechanism for the CHCs on various outcome measures. These outcome measures often connect to overall QIPs as set out by structures set by HQO (CHC Guidelines, 2012).

Niagara Falls Community Health Centre

In November 2005, the MOHLTC announced Niagara Falls as a recipient community of a CHC based on lack of access to primary care in the Niagara Region. A steering committee was formed in 2007 and the completion of a community engagement report was achieved in June 2008. The engagement report identified priority populations which included any resident of Niagara Falls not currently registered to a primary

healthcare practitioner, persons with mental health and/or addiction issues, low-income families, street-involved populations, including the homeless, under-housed, and sex trade workers, isolated seniors, at-risk children and youth, and newcomers and immigrants to Canada. Niagara Falls Community Health Centre (NFCHC) opened to clients in a temporary facility in February 2010 after hiring an executive director and a small primary care team. NFCHC has been approved for an expanded permanent site and is currently several years into a capital project that will move the CHC into a 13,000 square foot permanent location within its current neighbourhood. NFCHC has been in operation for six years with over 3000 clients registered to primary care and its various community programs.

Quality Improvement in Health Care

In June 2010, the ECFAA legislated quality of care as a core responsibility for hospitals (Matthews, 2010). Lohr's (1990) definition of quality is used within the health care industry which outlines that, "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge" (p.21). However, the ECFAA pushed the agenda further in Ontario making hospitals responsible for submitting an annual QIP to HQO (HNHB LHIN, 2014). This move pushed the definition of quality from a focus on health outcomes to also include a documented plan that demonstrates an improvement in practice in efficiency in work practice and use of resource. A QIP is a formal, documented set of quality commitments aligned with the system's provincial priorities that a health care organization makes to its patients/clients/residents, staff and community to improve quality through focused targets and actions (MOHLTC, 2013). The goals of a QIP include: shared accountability for transitions of care, measured patient outcomes with a

focus on improved care and aligned provincial and organizational priorities for improvement (HNHB LHIN 2014).

Implementation of Quality Improvement in Community Health Centres

In January 2013, all CHCs received letters from their local LHIN requesting the submission of a QIP to guide the quality efforts of the sector. A basic template for submission was provided through HQO which required an overview of the organization and written descriptions of various aspects of the CHC. These aspects included: the use of electronic medical records (EMR), perceived barriers to improvement and a general assessment of current efforts in the three areas of improvement focus for the MOHLTC (access, integration and patient satisfaction). The deadline for submission for all QIPs was April 1, 2013. HQO required these plans to be posted to their website; however there was limited guidance as to how CHCs were to operationalize these QIPs in practice. The leadership teams of CHCs were then left to develop their own action plans and strategies from which to enact changes to achieve measurable improvements in these metrics. This process of QIP submission indicates that QI is an increasing priority for the healthcare sector, but its completion does not necessarily ensure an organizational culture that values QI in its day to day practice (Schein, 2010).

NFCHC's Response to the Need for Quality Improvement

The NFCHC, where I am employed, created a small committee with representation from both the leadership and the clinical team to create and implement the QIP process. The committee comprised of the executive director, the program director (myself) and a nurse practitioner. This team completed a basic plan that included the three areas identified by the MOHLTC and HQO as priorities: access,

integration and patient centred care (MOHLTC, 2013). Each of us completed a portion of what became the final board approved document submitted to HQO on April 1, 2013.

The leadership team at NFCHC wanted to better understand the broader issues surrounding QI in healthcare. Therefore, an independent QI coach was hired to teach the staff the basics skills for performing good QI within the CHC, following the principles of the Model of Improvement including Plan, Do, Study and Act (PDSA) cycles, process mapping and useful data collection (Langley, Moen, Nolan, Nolan, Norman and Provost, 2009). The QI coach had over twenty years of experience in the CHC sector and had also been a coach at HQO during the initial quality improvement rollout across the province. She conducted three educational sessions with all 24 NFCHC staff where the fundamentals of QI were explained along with basics of data collection and analysis.

From here, the NFCHC clinical staff created their own quality committee with staff volunteers who represented each professional department. The executive director and health program director (myself) were also part of this committee in order to help develop and guide the QI work. After a one year period, the nurse practitioner took over the lead role on this committee and the executive director removed himself from the committee. My work with this team moved from a leadership role to being an equal member of the team over the course of the first year and has continued in this capacity. I attend regular meetings but do not set the agenda or make suggestions for work projects.

Panel Size Project

One of the most notable areas of QI improvement within the CHC was the importance of meeting LHIN panel size requirements which are part of the access to care agreement in the MSAA. Panel size is the number of patients that each physician

or nurse practitioner must have rostered to their individual care based on a patient complexity score that is made up of illness and demographic factors (Association of Ontario Health Centres, 2013). At the beginning of 2014, internal data at the NFCHC demonstrated that the organization had an issue with panel size meaning that the CHC was not providing care to enough individuals. NFCHC had the lowest panel size saturation in the HNHB LHIN at 37%, meaning that based on the overall complexity score for the CHC, the CHC was only caring for 37% of what was deemed their overall capacity. So instead of the 2,617 patients the team should have been caring for, they were only providing care for 968 patients. Therefore, NFCHC had a performance target with the LHIN to raise this percentage to 50% by March 31, 2015 or end of the fiscal year.

In an effort to do this work, the NFCHC QI team focused on panel size saturation as its main QI project for the year 2014/2015. The team set a target of new patient intakes at 6 per week to insure a constant intake of new patients would not create a backlog for existing patients looking to make an appointment. In 2014, the CHC took on 336 new primary care patients by specific work done through PDSA cycles with outreach to the local hospital system, new street signage at the CHC, and an improvement intake process for new patients. As of March 2015, the NFCHC reached 50% of its panel with a view to increase the percentage to 60% by the end of the next fiscal year in 2016. This achievement marks a success and served as a motivator for the team to push forward with this project as well as other projects.

Culture for Quality Improvement

In addition to the panel size project, the team has also achieved all of its health screening MSAA targets for the LHIN due to concerted effort in the area of QI. The team made a number of changes within the physical working environment to support QI

initiatives including publically posting their individual performance statistics for measured areas of care (Niagara Falls Community Health Centre, 2016). An example of this is the display of QI activities and the supporting data that is related to offering of various cancer screening tests. The team regularly posts service measures in the clinical area that is open to all visitors of the CHC which makes their performance clearly visible to all. They installed a large white board in the clinic dedicated to QI where staff are encouraged to write ideas, inefficiencies, and observed improvements with the condition that they initial all feedback on the board taking responsibility for their comments. These practices indicate that the QI team at NFCHC has looked beyond the basic measure of a QIP and use QI in their daily primary care practice.

NFCHC has quickly gained a reputation in the Ontario CHC sector for having a robust, staff-led QI team. Various staff members are often asked “what is the secret of the team’s success?” The team has found this to be a difficult question to answer.

Ecological Models of Development: Theoretical Framework

Various environments, ranging from the micro to the macro may impact the development of a QI team. In the area of developmental psychology, Bronfenbrenner developed an ecological paradigm (1977) that states that human development takes place through processes of interaction between the human and the persons, objects and symbols in the environments around them. Bronfenbrenner describes these environments from the micro system which includes activities, social roles and interpersonal relationships in a setting with particular physical and social features such as a work place (1988) to the macro system which is a culture that reflects the values of a belief system, body of knowledge or customs embedded in a broader system (1988).

The theoretical model for this project will come from this ecological model of human development as it is these various environments that warrant exploring in relation

to their impact on this particular team's development in relation to QI. These environments function not only in isolation but also create pressure and blend into one another to influence the whole. Bronfenbrenner suggests that "in order to understand human development, one must consider the entire ecological system in which growth occurs" (1993). While Bronfenbrenner is studying child development, his theory can be applied to the development of other entities. This project will attempt to do something novel by applying his theory to organizational research in relation to team effectiveness. As with most organizations, the NFCHC QI team functions within a microsystem that includes activity in day to day work patterns, social roles within the QI team, in particular, and interpersonal relationships across the broader staff team. This system includes "physical, social, and symbolic features that invite, permit or inhibit engagement" within an environment (Bronfenbrenner, 1993). It is these smaller micro elements including interpersonal relationships, work space layout, or communication styles that have not been fully explored in relation to their influence on the successful implementation of QI.

The mesosystem of NFCHC is also important to consider when assessing the success of this team within the broader structure of the organization. This mesosystem is a system that encompasses the linkages between two or more settings that affect team members such as the environment of the broader workplace and the environment of another system such as individuals' home lives or, in this case, the QI team (Bronfenbrenner, 1993). It is at this level that this research project will look at the culture of change management, team cohesiveness and leadership. Exploration at this level will identify factors from an organizational level that affect certain conditions or processes that also exist within the microsystem of the QI team (Bronfenbrenner, 1988).

Finally, there is the macrosystem that includes the culture, belief system, bodies of knowledge and leadership structure of the broader environment in which the individual or group exists (Bronfenbrenner, 1993). For the sake of this project this would include

the mandates and authority of the MOHLTC, HQO and the local LHIN. The NFCHC QI team operates within the environment that is beholden to the plans, strategies and direction set by high level leadership of the Ontario health system. Bronfenbrenner has additional ecological systems in his theory, including: (1) Exosystems which include at least two settings where at least one setting does not directly contain the team members such as the relationship between the CHC and the local hospital system (Bronfenbrenner, 1993), and (2) Chronosystems which extends the environment into the third dimension by taking into account the evolution over historical time (Bronfenbrenner, 1993). Depending on the scope of a particular research project and the variety of easily identifiable influences can impact on how many of the ecological systems are applied in a particular case (Bronfenbrenner, 1977). For this project, it makes sense for this project to limit the environments to those that are connected to the implementation of QI within the NFCHC organization which would be the macrosystem of the Ontario healthcare including the MOHLTC, HQO and the local LHIN, the mesosystem of the NFCHC as a whole and its leadership team and the microsystem of the QI team and the interactions of its individual members.

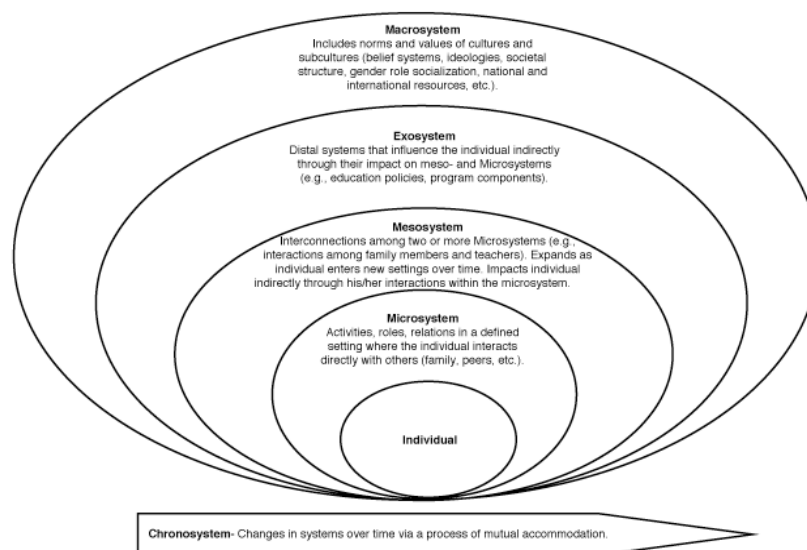


Figure 1. Bronfenbrenner's ecological systems framework (Swanwick, 2014)

Chapter 2 - Literature Review

To investigate the ecological systems that impact the NFCHC QI team, the areas of organizational culture, leading change and team development were reviewed. In addition, literature on ecological environmental models and researcher reflexivity were explored to assist with developing a theoretical lens for this research project. This literature informed the data collected from team and management interviews. This chapter also discusses the gap in the literature on CHCs and QI which helps to form the research question and objectives for this research project.

Literature Search Strategy

In conducting the review of literature, databases Medline, Ovid, Google Scholar and Academic Search Premiere were used with initial search terms of “team culture”, “quality improvement”, “culture change”, “primary care”, together with “healthcare”. After an initial gathering of literature was completed, more specific terms including “leadership”, and “improvement” were searched. All reference lists from the literature pulled were reviewed so further sources could be identified that were relevant to the research topic. In consultation with my academic supervisor, the vast amount of culture literature was narrowed to identify key theorists whose work appears to be best suited for the scope of this project.

QI research is constantly evolving and there is an increasing body of work emerging. In order to be current and timely, I worked with Elizabeth Yates, the Health Sciences librarian to set up regular searches in the area of primary care and quality improvement. Over the course of the last year, those searches produced no new published research in the area of primary care and QI.

Limitations in the Literature

In context of this research project, the question of how CHCs might identify success in QI differently than other healthcare organizations is raised. While some

organizations, such as hospitals, spend considerable resources to implement improvement measures (Luxford et al., 2011), there is a varied level of evidence on the success of improvement measures and simply applying quality improvement across an organization is no guarantee of ongoing implementation of QI (Groene et al., 2009). Research in large health care organizations across the U.S. suggests that there are a variety of factors that affect the implementation of new concepts including strong leadership, clear strategic direction, focus on staff satisfaction, active measurement, adequate resourcing, staff capacity building, accountability and cultural support for change (Luxford et al., 2011). However, this research applies to large complex health care delivery systems. With a lack of research in the area of successful implementation of QI in primary care models in general and CHCs specifically, it is difficult to identify if these factors and/or others influenced the implementation of QI at the NFCHC.

Furthermore, beyond the broad environmental factors, there may be individual characteristics or small structural elements or relational elements in the team that also contribute to the success of this team that can only be identified by specific and detailed inquiry within the microsystem (Bronfenbrenner, 1994). Therefore, when considering these multiple levels of analysis that could impact the success of the NFCHC QI team, this project will attempt to address the multiple ecosystems that might be influencing the operation and impact of this team using Bronfenbrenner's model.

Quality Improvement in Primary Care

Other than a small qualitative exploratory case study on QI in a Hamilton based FHT (Hilts et al., 2012), there is very little research on QI in primary care in an Ontario setting. This small study at a Hamilton FHT reported on culture change, improved team relationships, and the importance of leadership (Hilts et al., 2012). These findings are consistent with those from large scale successful implementation of QI in hospital departments which included culture of quality, well-functioning teams and supportive

institutional leadership (Swensson et al., 2015; Lukas et al., 2007). It would be reasonable to suspect that those characteristics would hold true for the CHC model particularly because the FHT model in Ontario is similar to the CHC model of care. While they are funded differently, they have a similar staffing structure and are both obligated to submit QIPs to HQO on a yearly basis.

Organizational Culture

Organizational culture is a set of attitudes, beliefs, customs, values, and practices that are shared by a group (Alvesson, 2002). Schein (2010) defines culture this way:

The culture of a group can now be defined as a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems (p.18).

Culture is specific to each organization and is the invisible structure that holds it together (Tye, 2011), and explains why an organization chooses specific goals and mandates (Zhou, Bundorf, Chang, Huang, & Xue, 2013). Schein (1990, 2010) states in his theory that there are three levels of culture: (1) artifacts, (2) espoused values, and (3) assumptions.

Artifacts. These are the elements of the organization that can be observed in a group that include the physical environment, language, technology, stories told about the organization, and published values (Schein, 2010; Sproat, 2001; Tye, 2011).

Espoused Beliefs and Values. Schein's theory (2010) states that culture is also made up of beliefs and values that are recognized by the group members. These beliefs and values are the ideas, goals and values of the organization (Fitzgerald & Desjardins, 2004; Schein, 2010). These values have a direct effect on whether the work group members perform is positive or negative (Schein, 2004).

Assumptions. The last component of organizational culture is assumptions where overtime values are adhered to because their positive effect is taken for granted by group members (Schein, 2010). This level of culture is extremely important for understanding how behaviour, perception, thought, and feeling effect work outcomes (Schein, 2010).

Organizational Subculture

All organizations divide into smaller groups through growth and time, becoming their own separate cultures (Schein, 2004). These are subcultures of the organization, which happen for the following reasons: (1) functional differentiation, (2) geographical decentralization, (3) differentiation by product, market or technology, (4) divisionalization, and (5) differentiation by hierarchical level. In the case of this project, Schein's theory of culture (2004) can be applied to the QI team at NFCHC and demonstrates the different ecosystems it exists within. While the team members are all staff at NFCHC and can be identified by their use and interactions with the artifacts, values and assumptions of NFCHC as a broader organization, they also are part of a smaller culture within their QI team where those elements might be different or operate independently of the broader organization. These ideas of culture are directly applicable to this project.

Leading Change

Leading successful organizations is about setting the direction and work agenda for the employees so they will know what they are working toward (Schein, 2004). Schein (2010) says that "the most powerful mechanisms that founders, leaders, managers, and parents have available for communicating what they believe in or care about is what they systematically pay attention to" (p.237). Organizational structures that are interested in the advancement in QI track its progress. Hospital QI research points to the necessity of a reporting structure that allows for failure and error without blame and

the ability to discuss mistakes with a quality lens (McFadden, Henagan&Gowen, 2009). Similarly in primary care, specific attention directed to QI work gives it validity.

CHCs are community organizations that include an executive director and, often, a broader management team that will include clinical or program managers or directors. This often means similar to larger health system organizations, CHCs have dedicated leadership to set the mission, vision and values of the organization and set the tone of the work being completed. This kind of leadership allows the aligning goals of the organization with the process of QI and the culture needed to support it (Batalden&Splaine, 2002). This structure indicates that leadership may have an influence on the integration of QI across the organization and may be identified as a contributing factor.

Leading change in organizations is difficult and successful outcomes often hard to achieve (Kotter, 1996). When researching over 70 companies, John Kotter (1996) calculated that only 10% were able to achieve the changes they wanted to implement. From this research, he outlined an eight step model for implementing successful change including (1) a sense of urgency, (2) build a guiding coalition, (3) form a strategic vision, (4) enlist a volunteer army, (5) enable action by removing barriers, (6) generate short-term wins, (7) sustain acceleration and (8) institute change (Kotter,1996).

However, over time, Kotter also recognized that not all steps are of equal value and broke down the first step of creating urgency even further. It is in this first step of creating a sense of urgency that is seen within NFCHC at the beginning of its attempt to initiate QI practice. Kotter (2008) states that urgency requires four tactics if it is to lead to lasting change. The first tactic is to bring in expert help. The NFCHC QI team identifies that having a QI consultant was crucial to their success. Second is to behave with urgency every day. The NFCHC team has very specific deadlines for the reporting of their QI data that translates into this type of urgency. They have seen the most success

in periods where there are tight timelines and specific targets. This kind of success can be seen in Kotter's third tactic which is the organization's ability to find opportunity in a crisis. The NFCHC panel size project created the environment of crisis where the team needed to hit a specific target with a tight deadline. This created a crisis within the team but they were able to put in place the changes needed to achieve the goal. Finally, tactic four is dealing with no-nos or people who do not buy into the vision. Overtime, both NFCHC and the QI team have removed staff who did not buy into the broader vision of the team.

These theories of change management outline elements of change in team culture or process in an effort to sustain new initiatives or ideas. If there is an internal sense of success for the NFCHC QI team in how they approach the implementation of QI, there should be inquiry into how they moved through this type of change. Additionally, it is important to identify the factors, both on a large and small scale, which positively affected this transformative change.

Team Development

Health care teams have been the focus of a great deal of research in the last several decades and as care costs increase, there is a continual push to move care provision to a more cost saving model. Creating teams have been thought of as a way to accomplish this overarching goal. The research points to better outcomes, processes and patient satisfaction in environments that effectively use teams (Kilgore & Langford, 2009; Fewster-Thuente&Velsor-Friedrich, 2008). Some researchers believe that well-functioning teams are the best approach to addressing the most complex tasks in health care including improving patient care and patient safety (Youngwerth& Twaddle, 2011). QI can be viewed as is a team exercise where numerous disciplines must work together to successfully and communication is at the core of the exercise. Communication that is facilitated at team meetings is associated with innovation, resolving conflict, developing

effective interpersonal relationships and reducing professional barriers (Youngwerth & Twaddle, 2011).

Cohesiveness or how connected team members feel to one another is yet another factor that adds to a team's ability to implement good work process (Cant & Killoran, 1995; Bond et al., 1985; Cashman, Reidy, Cody & Lemay, 2004). Qualitative research suggests that primary care teams have to be sustained at a cohesive level if they are to function at a high level requiring regular professional activity that includes regular meeting times, connectedness through team building exercises and a sense of support for one another personally (Brown et al., 2010). Primary care teams are often much smaller than those in large scale care systems meaning that employees in primary care teams have the opportunity to develop more connected relationships that can lead to positive outcomes for both process and patients (Craigie & Hobbs, 2004).

CHCs were designed around a team approach to primary care and, therefore, CHC staffs are quickly acclimatized to the team functionality for working on problems collectively with a view to hear from all disciplines. This type of research on health care teaming may provide insight into why the NFCHC QI team has managed to create a positive working environment in their interdisciplinary approach to improvement.

Research Gap

The literature indicates that organizational culture, leading change, creating a sense of urgency and effective teams could assist in the positive implementation of QI practice in primary care. However, without specific research done in primary care QI implementation, it is difficult for primary care practices to identify why or why they are not achieving success in their QI efforts. The question that remains is: Are factors identified in research in other industries applicable to the CHC context? This is particularly important given the mandate from the MOHLTC for all CHCs to have QIPs and report on their successes and failures on a yearly basis. In addition, it is difficult to quantify and

share successes with other CHC teams who are looking to benefit from the lived experience of CHC teams that have more experience with adoption and ongoing implementation of quality improvement. In addition it can be complicated and difficult for team members to narrate the structure that supports their success.

Research Question

The research question that emerges for this project is: “What elements do the NFCHC QI team identify as key factors that impact their ability to effectively use quality improvement strategies within their clinical practice?” The main objectives are to (a) describe in depth these key factors and (b) to locate these factors within an ecological model to better understand the various environments that drive ongoing commitment to quality improvement within NFCHC.

Chapter 3 – Methods

This chapter outlines the methodological approach for this research project which is a single case study design. The researcher paradigm, methodology, data collection and analysis are all described. As well, researcher reflexivity is discussed together with quality of data and ethical considerations that were addressed as part of this project.

Qualitative Research through an Interpretive Paradigm

The last few decades have seen an increased use of qualitative research methods in health care which are usually inductive and working from data to theory (Morse, 2012). This allows for patterns and themes to surface, which echo the voices of research subjects to be heard in the research (Creswell, 2013). Qualitative research methodology allows the researcher to by-pass the traditional scientific inquiry and move to a more interpretive approach (Atkinson & Hammersley, 1994) that better captures the social and human elements that create environments. Interpretive researchers study multiple realities constructed by people and the impact of those realities on the environments around them (Patton, 2002). It was this lens that was of particular interest in this project where data was collected but was seen through the lens of a researcher that had years of practical working knowledge of both the operation of the organization and how the team being studied interacted on a day to day basis. This provided a unique opportunity to bring the voice of a management perspective to this project with a view to identify the uniqueness of this team and what specific steps could be taken to replicate a positive outcome in other primary care environments. Qualitative research provides a framework to address the various ecological environment that affect the development of the NFCHC QI team including: (1) the macro environment of health system initiatives and directives; (2) the meso environmental factors of culture, leadership and change management as potential organizational factors influencing on the team's ability to adopt and implement a QI strategy in their clinical practice and; (3) the micro environmental

factors that happen at the level of person to person interaction. It is the interpretation of these environmental elements that opens the possibility for other elements to emerge from the inquiry. These elements may be smaller and less obvious but no less impactful on, in this case, the implementation of QI.

Researcher Reflexivity

Reflexivity is “the relationship a researcher shares with the world he or she is investigating and the ethical issues that flow from this close relationship” (Reeves, et al., 2008). Reflexivity strives to provide a transparent approach to how the researcher affects both the tools and methodology of a particular research project and its findings (Higginbottom, 2013). This was particularly important in this project where I was very familiar with the team being studied and every attempt was made to show these connections to maintain validity (Denzin & Lincoln, 1998).

Reflexivity is relatively common place in qualitative research where the researcher acknowledges their impact on the project they are pursuing (Richard & Morse, 2013). My interest in this project arose from professional curiosity and a genuine interest in the team I work with in my professional capacity. As a manager, I am interested in how some environments can embrace change and practice evolution and other settings resist. I am well versed in organizational change management theory, but also aware that there are many nuances that can affect basic human interaction both positively and negatively. As I witnessed the team’s evolution and saw how they embraced this new way of approaching improvement, I knew from previous experience with organizational change that what I was watching was multifaceted and various elements were impacting the environment that surrounded this team. However, identifying those elements is complex. I also knew that what I might identify from an organizational perspective may not be as obvious to the individual team members. They,

too, may see things on an operational level that I couldn't from my outsider perspective since I was not directly involved in the day to day practice changes.

It is important to recognize that my position and professional experience helps me to see this issue from a unique vantage point and assisted with the data analysis. The data analysis for this project was an inductive process that allowed themes and patterns to emerge, my immersion in this environment assisted in allowing the voices of this team to be core to the findings (Creswell, 2013). It created a deeper, fuller understanding of what was happening in this environment. However, it should also be noted that I did bring previous knowledge collected from time of observing this team in a leadership capacity that continued throughout the research process that most certainly affects my perspective as a researcher. The opposite also holds true that the process of being a researcher has also had an impact on my leadership and not necessarily for the better which will be discussed in more detail in the discussion chapter.

Single Case Study

Single case study methodology provides a method of in-depth, real-life context, in order to better understand the relationship between the phenomenon and the environment (Yin, 2009). There are several types of case study including intrinsic, instrumental, and multiple or collective (Stake, 2005). Intrinsic case study was best suited to this project because it was this team in particular that fuelled my questions as a researcher. I was interested in understanding this team's functioning, with an interest in primary care QI teams as a secondary motivator. Furthermore, the single case study was particularly well suited to this project because it was bounded to a particular, defined team, in a particular environment within a particular time period which meant it can be intensive, focused and maintain a narrow scope (Yin, 2009). This methodology allowed for more in-depth analysis and a deep exploration of the uniqueness of this team.

Case study methodology aims to better understand the nuanced complexity of a specific phenomenon (Yin, 2009). It provides an interpretive approach that is able to capture the true nature or culture of human social settings (Holland, 1985) and thus avoiding more “positivistic” or “scientific” methods that miss the influence of human action (Atkinson & Hammersley, 1994). This method draws on a wide range of information by having the researcher watch, listen, ask questions and fact collect from whatever data is available, hoping to uncover phenomena that has currently gone unexplored (Atkinson & Hammersley, 1983).

Single case study has a number of strengths as a research methodology. Savin-Baden & Howell Major (2013) outline the positive characteristics of case studies as: (1) flexibility as it lends itself to the use of various philosophical frameworks, (2) depth of investigation by emphasizing contextual analysis (Merriam, 1988), (3) thoroughness allowing for the complexity of understanding of a complete context (Simons 1996:225), (4) responsiveness by reacting to changes that occur in real time and (5) wide appeal by being accessible to a variety of audiences making them useful beyond the scope of academic research.

Case study, however, is not without its critics. A main criticism is the inability to draw generalizations from case study that can then can applied to other settings and, therefore, limiting its contribution to research development (Savin-Baden & Howell Major, 2013). Flybjerb (2011) argues that generalization is overvalued in scientific development and that a single case study can easily form the basis to new theory development. This is important to this study as there has been no previous research in the area of QI implementation in a CHC primary care setting and this case study may create a starting point for further investigation.

Data Collection

Case study research is known to use multiple sources of data, as the multiple sources of evidence will help to add credibility to the research (Patton, 2002; Thomas, 2011; Yin, 2009, 2012). For this project, individual interviews, and researcher reflection were used as methods to collect data on which to draw an in-depth overview of this team's successes (Yin, 2009, 2012).

Interviewing

Interviewing is a common method of collecting information for research purposes (Fontana & Frey, 2000; Denzin & Lincoln, 2000). It is a way for gathering information that is not readily available simply by observation (Chang, 2008). While a researcher may be able to observe the types of interactions between team members, it is harder to know the feelings that team members might have about the work that they are doing that influence how the work is carried out. Interviews yield direct quotations from people about their experiences, opinions, feelings, and knowledge (Patton, 2002). In-depth interviews allow researchers to ask participants about facts, as well as their opinions about an event (Yin, 2009). The purpose of the in-depth interview was to obtain a rich, in-depth experiential account of events, and in this case, about the implementation of QI at NFCHC (Fontana & Frey, 2005). The interview was used to find emerging patterns or themes from "thick descriptions" of social life recounted by the participants (Hesse-Biber & Leavy, 2010). Interviews can be designed in such a way to capture the feelings or ideas that team members employ in their daily work that they may not be aware of in their ongoing interactions. Interviews, both formal and informal, are crucial to helping to map participants' responses to inquiry, coding and analysis (Cruz & Higginbottom, 2011). Interviews can help to validate observations, facilitate data collection on difficult to observe states such as emotions, and help formulate the direction of future observation

(Roper & Shapira, 2000). For purposes of this project, interviews with staff and the executive director were conducted by the lead researcher.

This project used a semi-structured interview guide (Appendix E) created to allow the participants to share detailed insights while still ensuring that questions were aligned to the theoretical framework (Yin, 2009). The interview guide was designed with initial questions to obtain background information about the team including their clinical positions and their basic understanding of QI at NFCHC. The following set of questions was designed to allow the interviewees to share their ideas and opinions about elements that affect the team and its operation. Prompts for this section included inquiry about larger organizational characteristics, personal characteristics and any other environmental factors the team member felt impacts the team's function. Interviewees were encouraged to expand on their answers to ensure that the interviewer understood the team member's point of view. The interviews were similar to a guided conversation, rather than a structured query (Hesse-Biber & Leavy, 2010). The interviews were also performed by another researcher, other than me, who was familiar in the concepts of QI and with previous interview experience. This was to address the issue of familiarity of myself with this team. In order to get the most descriptive feedback from the team, it was advantageous to have an interviewer that is less familiar with the historical evolution of this team, who would need to ask for further details about events that I might not pursue because I feel I already know the answer or details around a particular set of events. Having more than one researcher also allowed for convergence of observations and enhanced confidence in the findings (Eisenhardt, 1989).

Between the days of February 18th and March 1st, 2016 a total of six participants (N=5 females; N=1 male) who were staff directly connected with the QI work at NFCHC were interviewed. The participants included: (a) the executive director (n=1), (b) a nurse practitioner, QI lead (n=1), (c) a physician (n=1), (d) IT support (n=1), (e) a registered

nurse (n=1), (f) a medical receptionist (n=1). An additional interview had been planned with the other member of the team, a social worker, but was not able to be completed due to an unexpected medical leave. This included every member of the team with the exception of me. Interviewing the whole team gave feedback from different disciplines and allowed for the maximum amount of feedback representing the broader clinical team as each of those disciplines is represented on the QI team.

The interviews were conducted at NFCHC in a sound proof conference room at NFCHC at the request of the interviewees since the onsite location enabled the ease of their participation. This allowed for the team members to feel comfortable during the interview process (Heese-Biber&Leavy, 2010). The times were set on days and time that were convenient for the staff (Yin, 2009; Olsen, 2011). As per best practice (Yin, 2009), the interviews lasted between 30 to 55 minutes. The team was invited to participate through a letter of invitation (Appendix B). Although participation was voluntary, informed consent (Appendix C) was explained again prior to the commencement of the interview (Hesse-Biber&Leavy, 2010). All team members reviewed and signed the informed consent (Appendix C). All interviews were recorded and transcribed prior to data analysis (Yin, 2009). It should be noted that all staff expressed positive interest in participating in the interview process.

Participant Observation

Participant observation involves the researcher immersing him/herself in the lives and routines of a group within a particular culture (Kottak, 2006). This gives the researcher an emic sense of the culture being studied. In the study of culture, the emic approach refers to researching the way a group of people think and how they think or perceive their environment around them (Kottak, 2006). By being part of the work carried out, the researcher normalizes questions of inquiry and obtains a participatory sense of

the work being performed (Whitehead, 2005). As is the case with this research project, single case studies can happen within the researcher's workplace where access is easily available (Higginbottom, Pillay &Boadu, 2013). I have access to the team in my day to day role at NFCHC as a QI team member and a member of the leadership team. I am also fully immersed within the QI team and have a unique vantage to observe the regular workings of QI at NFCHC. However, the work is team led and managed by a staff lead who sets the agenda and decides on the way the work is executed. It is important to note that while I hold a director position within the organization, the QI team is completely autonomous in its operation and reports to the leadership for informational purposes only. The team chooses its own direction and projects. These projects are not in any way connected to job performance. Any performance based results that are collected through QI initiatives are posted based on the collective decision of the team and are not used in evaluating the job performance of any of the individual team members' roles outside of the QI process.

Data Analysis

When engaging the data collected, researchers start to look for meaning in the information by identifying patterns and trends (Yin 2009, 2012). Due to the flexible nature of case study, the focus for data analysis remained open. Coding refers to the labelling and systematizing of various data that can lead to thematic discovery in the work (Tracy, 2013). All of the data collected from six interviews with the QI team members and my personal observations collected during my reflection was integrated and then coded through a manual process where themes emerged (Podolefsky, 1987; Saldana, 2009; Stewart, 2010). For this project, the interview data was viewed through an inductive thematic manner where emerging themes were identified and categorized so that key issues or characteristics emerged. This way, theoretical explanations could be given to the empirical work (Reeves, et al., 2008). The semi-structured interviews were designed

to allow the team to identify various elements that affected their work. By using Bronfenbrenner's ecological models of development, I was able to identify those elements from each of the ecological environments around the team and describe the various influences on the team development from their own words.

Six staff members of NFCHC with various roles in the QI process were interviewed to identify what factors they thought helped them to create and to continue a successful QI initiative at the CHC. Following the interviews, the data was transcribed verbatim by an online transcription company (Olsen 2010, Yin, 2012). The transcripts were then checked for accuracy through member checking which produced no changes to the original transcripts and, therefore, the original data remained unchanged. These interviews were analyzed inductively (Ezzy, 2002) looking for categories, themes or patterns. This open coding allowed for key ideas to emerge and to form categories (Patton, 2002). The transcripts were read line by line multiples times to identify common ideas and notes or codes (Patton, 2002). Each idea was written on a separate piece of paper. In this project, 168 codes emerged. These codes were then grouped into broad themes and categories through a process called secondary-cycle coding which produced 27 high level codes (Tracy, 2013). Secondary-cycle begins the process of synthesizing the data into interpretive codes (Saldana, 2009; Tracy, 2013).

The next step was to engage in selective coding. Selective coding is when, with growing familiarity, the data is collected into larger groups that start to form from smaller codes (Ezzy, 2002; Patton, 2002). The process from this project began by using the sensitizing concepts identified in the literature review. This process is a method for seeing and interpreting the data that has been collected (Patton, 2002). The ecological framework and theoretical concepts from Schein and Kotter (i.e., change management, culture, and urgency) were also used to guide this process.

A constant comparative process was used during the analysis for this project. This process refers to an approach that requires that as elements emerge from the data, they are constantly compared to each other looking for explanations of similarity and difference (Thorne, 2000; Ezzy, 2002). Themes were scrutinized for commonality and difference from varying points of view. Therefore, by using sensitizing concepts, triangulation (data, researcher, and interviewer) and advisor input the process led to five themes and fifteen sub-themes. Holding a management role while also being the researcher on this project influenced how I was able to process the data through the analysis stage. It was especially helpful to have a broad knowledge of this team and their history so that when reading the transcripts of their interviews, I could decipher context and meaning from their responses.. This helped when creating broader themes during the initial analysis. It is possible the being very familiar with this team that there may have been a limitation by not being able to view the data from an outsider perspective. However, over all, familiarity made the process easier rather than more difficult. Special attention was also paid to outlying codes that emerged that did not align with the pre-defined sensitizing concepts such as the safe spaces theme. These codes took careful attention and extra time to identify particularly because they were unexpected but provided added insight from the data adding to the learning.

It should be noted that there were two codes that were considered outlier data meaning that the element identified did not align with any of the other codes that emerged. These were not included in the data set as they were assessed by the supervisor and me as the researcher as being small issues identified by only one of the interviewees. Ultimately, it was decided that they had little impact on the larger themes.

Quality in Research

Qualitative case study inquiry requires four criteria to be considered when ensuring quality in research: credibility, transferability, confirmability and dependability, to enhance rigour of the data collection and analysis (Lincoln & Guba, 1985) that will be considered in this project.

Credibility. Results should be believable, convincing and reflective of the participant reality (Saven-Baden & Howell Major, 2013). For this project, credibility was addressed through data triangulation and member checking. Data triangulation is gathering multiple sources of data, in order to corroborate the same phenomenon (Patton, 2002; Yin, 2009). Individual interviews were conducted from team members who represented various clinical and non-clinical disciplines across the organization providing different points of view of the work of QI. Data triangulation happened, as themes and categories were examined for points of convergence and divergence. This method indicates that as information emerges, it should be compared against other explanations for similarities and differences (Ezzy, 2002). These comparisons allowed the data to be grouped together and differentiated as themes were identified (Ezzy, 2002; Yin, 2009). The themes were then described repeatedly from different point of views to understand how the event or situation may best be categorized (Yin, 2009). The key themes were then compared to reveal relationships that exist among the broader themes (Corbin & Strauss, 2008).

Member checking was also used in this project. Once team members were interviewed, a transcription of their interview was given to them for their review (Patton, 2002). Team members were given the opportunity to provide feedback on the transcript and given the option to add or remove information to ensure their reality is adequately reflected in the researcher's collection of their information (Patton, 2002). It is important to note that no changes were made to the original transcripts.

Transferability. Transferability is the ability for the research findings to be applied to other contexts (Gagnon, 2010; Yin, 2009). In case study research transferability is achieved through careful research design and characteristics of the study (Yin, 2009). CHCs across the province are now required to have QI plans and implement them into their daily clinical practice. It is possible that other primary care teams are implementing successful QI strategy in their organizations and could resemble the team studied in this project. It is likely, given the structures of CHCs, that the team in this case study has similar characteristics to other primary care teams in CHCs across Ontario, including those in other primary care models; thus the results could be generalized to other primary care practices with the same population characteristics (Gagnon, 2010; Yin, 2009).

Confirmability. Confirmability suggests that a researcher will remain neutral during data collection and analysis ensuring that the same phenomenon could be discovered by other researchers looking through the same framework, using the same methodology in a similar or identical setting (Lincoln & Guba, 1985). Confirmability was attempted in this project through the analysis of the data using a constant comparative method as previously described (Gagnon, 2010; Patton, 2002).

Dependability. Dependability is the notion that if another investigator followed the same procedures as described by an earlier investigator and conducted the same study again, that the researcher should arrive at the same findings and conclusions (Yin, 2009). Thus dependability of the results is largely dependent on the rigorous process of data collection (Yin, 2009). In order to achieve dependability, this project used a dense description of context and findings. This involves providing in-depth information about the culture and context where the research was completed along with sufficient data in the form of quotes and observations (Savin-Baden & Howell Major, 2013). This allows another researcher to consider if the same results might be found in similar contexts.

Ethics

All research has specific ethical considerations. For this study, confidentiality and informed consent were core to the project. The project underwent ethics approval by the Brock University Research Ethics Board (REB) and received ethical clearance [File # 15-166] (Appendix H). In addition, to the ethics review, I completed the mandatory tri council ethics module for all graduate students. The issue of ethics and a single case study can be challenging, particularly where the researcher plays a significant role within the culture that is being studied. However, Murphy and Dingwall (2007) point to the issue of beneficence and that the research should produce positive and identifiable benefit for the subjects. This research project attempts to uncover information that the team members are interested in understanding about themselves. Also, the phenomenon in question is positive. This team is proud of the work that they do and want a way to describe it that is credible and possibly helpful in another primary care environment.

Confidentiality

Confidentiality refers to the protection of individuals who participate in research so that they do not experience negative outcomes due to their involvement (Ezzy, 2010; Yin, 2009). All identifiers other than job title were removed from data collection. The only people with access to the collected data were the principal investigators of the study. Interviews were conducted at the time and location of the participant's request. All data that was collected was de-identified before delivery of any content. Quotes are attributed to job description and not to specific people involved in the research. Interview audio files are password protected and will be destroyed on the completion of the project. Hard copies of data are stored in a locked cabinet in the researcher's desk. The audio files will be deleted and transcripts will be archived in a locked cabinet for seven years and then destroyed.

Informed Consent

Informed consent refers to receiving permission from a research participant after they have been fully briefed on the nature of the research (Chang, 2008). This type of human protection is crucial to qualitative research to ensure all research is done with the utmost care (Ezzy 2010, Yin, 2009). Although confidentiality was a priority for this research, it was explained to the participants that because this is a single case study methodology, participant anonymity cannot be guaranteed. The identity of the researcher was disclosed and the team in question is small, therefore the identity of participants mentioned in the data is difficult to protect. Therefore, informed consent was sought and achieved from each participant. However, the research is around the success of a team's work and, therefore, there is no reason to believe that the participants require protection from harm (Yin, 2009). It is also important to note that none of the participants raised any concern about this issue.

Chapter 4 – Results

This chapter is presented in three sections. The first section is a reflexive reflection that provides my personal observations of the QI team at NFCHC as an organizational leader. It was included as a way to insert my own observations to provide a detailed background on the team and to contrast against the team's observations of themselves. The second section is the case description which provides additional background information on the group of individuals interviewed for this project. The final section is a detailed description of the findings for the project which are comprised of themes and sub-themes. These findings are further explained using, direct quotes from the QI team interviews.

Reflection of a Manager

As part of a leadership team that has led the NFCHC organization for the past three years, I am keenly aware of the work that has been done within the organization to address the issues identified in the literature review of this project including: organizational culture, leading change and team development work. This provided me with a unique perspective of the organization in general and the development of the NFCHC QI team in specific. Prior to collecting data from the QI team at NFCHC and analyzing their feedback, I wanted to capture my own thoughts about what might have made this team successful in our work environment. To adequately capture my observations, I started this process by making a visual timeline of how QI unfolded over the past three years within our organization. In the margins of the timeline, I started listing events or decisions that were made around this team that might have influenced them and their evolution. After completing this exercise, I made a list of strategies or theories that I had read, studied or been exposed to over my past couple of years in my leadership role.

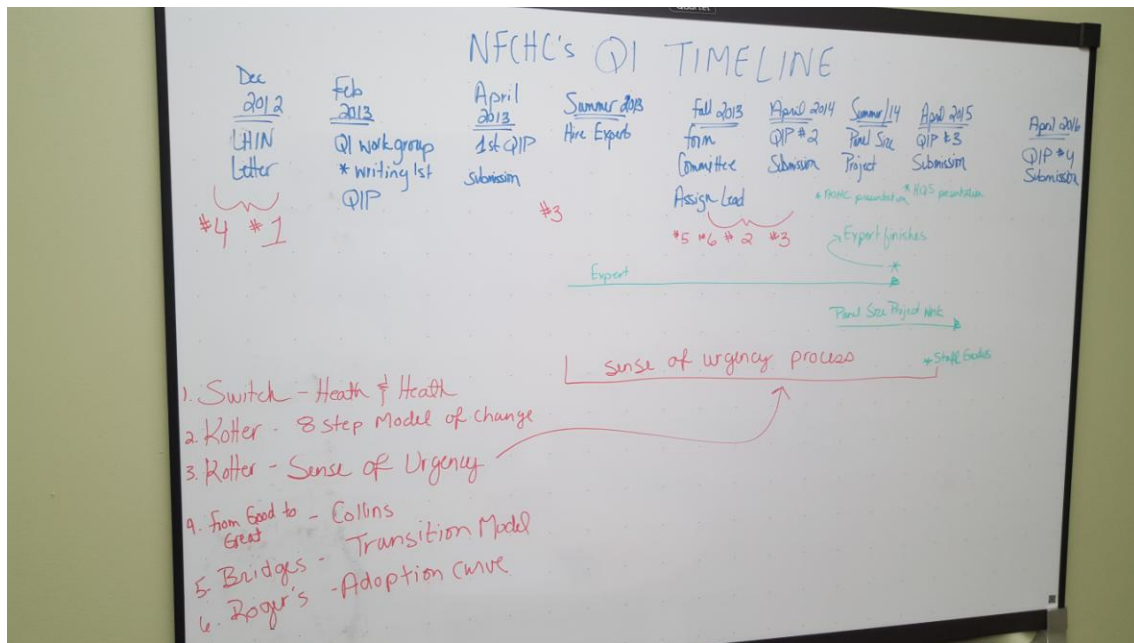


Figure 2. NFCHC's Management Theory Timeline

Looking at these notes, I noticed a correlation between what looked like a map of the stages of development of this team and Kotter's sense of urgency theory that is outlined in the literature review which I had read in the early stages of my management role at NFCHC and had revisited in an MBA class during the first semester of my Master's program. What follows is a narrative reflection on the connection between that theory and the timeline of the implementation of QI at NFCHC.

Four years ago I had no idea what QI was. I was transitioning from being a health promoter and member of the allied health team at the NFCHC into a management position. As a team member, I had proven to be a dependable and approachable in a work culture that suffered under significant staff turnover and the sudden departure of a senior manager. I was hoping to bring those qualities with me as I moved into health care management for the first time. I had a steep learning curve ahead of me that included change management, team development and strategic direction.

One thing that quickly became clear to me was that the organization was going to have to change if it was going to retain staff and manage to keep up with the growing demand for efficiency and accountability. We began making those changes one small step at a time. We addressed our hiring practices to focus on hiring staff who exhibited the values of the organization, we adopted a coaching approach to quarterly performance appraisals, and we moved toward increased autonomy for team members in their clinical workflow. While I think we have experienced tremendous progress and success as an organization, it is still hard to pin point what exactly in that evolution has enabled the success of the current QI team. That being said, there are a number of particular things that have happened that may point toward a positive outcome for QI in particular. John Kotter speaks clearly about a sense of urgency when it comes to effective change in organizations and his descriptions follow closely to what I experienced in working with our emerging QI team.

During my first year in my new position, QI became an obligation for the CHC sector. There was a deadline for submission of a specific plan around QI for the organization to the MOHLTC and a very tight turn around. We included a nurse practitioner from the clinical team who had the longest work tenure on the team. We divided the workload and developed a plan that was based on collecting baseline data for improvement within the CHC. We quickly understood that we had a lot to learn. My opinion of our leadership team is that it knows when it doesn't know something and we quickly brought in outside help. John Kotter in his book *A Sense of Urgency* (2008) says that the first tactic to bringing about positive change within organizations is to seek guidance from external expertise. Our goal was to be good learners by better understanding the theoretical elements of QI and learning from the experience of others. We hired a consultant with more than 20 years experience in both QI and the CHC sector. She not only exposed our team to all the elements of quality, she was able to

speak to the successes and failures in other CHC environments. She was an excellent cheerleader and was able to encourage the desire to learn within the NFCHC team. By treating the staff like experts in their own environment, she was able to create a real sense of buy in from the team that created a desire in them to test small changes to see if it created any efficiency in work flow. She worked closely with the team for a year and then continued to consult with them on a regular basis. She managed our data until the team felt ready to take on this piece for themselves. From a leadership perspective, my observation is that this created a sense of safety for the team. They knew that there was an expert who could answer any of their questions or help brainstorm solutions they might not arrive at on their own. There was also someone to help maintain the momentum when the team was slowed by minor details. With two years of expert leadership and instruction, the team became experts in QI in their own environment helping to empower them to attempt new projects and change ideas.

Another contributing factor was the daily sense of urgency (Kotter, 2008). Several months into our work with the consultant, it became increasingly apparent that the CHC was not providing care for enough patients (panel size). We were under increasing pressure to increase this number by bringing in new patients. This project seemed like a good fit for the QI team, although our consultant advised us that it might be too big of a project for a new team to take on. She was concerned that the possibility of failure was high and may derail the team from other work it could be doing. However, the team wanted to work on this project and set out to create PDSAs that helped us track initiatives that might bring the CHC new patients. NFCHC had an agreement with the LHIN to increase our panel size to 38% from 50%. Ultimately, after all the feedback from the expert, we allowed the team to make the decision about taking on this project as a QI initiative.

In the end, this project helped to motivate the team to behave with urgency. This element is also part of Kotter's strategy for creating culture change through increasing sense of true urgency (p. 60). The deadline and specific target for this project motivated a team that was already highly competitive about outcomes. The project had a high level of importance so that the work felt significant but they had enough time to complete it so it was not overwhelming. The project gave the QI team meetings a focus and the PDSAs showed progress in a timely manner that made the team feel a growing sense of accomplishment. The challenge fuelled discussion and helped to bond the team through a common goal. The outcome was positive and the team managed to reach their goal by the end of the year giving them a real sense of success. My thought is that it cemented the team together where smaller projects might not have produced the same result. The team began acting like a team that could successfully tackle any QI project that was given to them.

Kotter's theory outlines the importance of finding the opportunity in crisis (p. 119) which I can easily apply to the evolution of the team at NFCHC. The panel size issue at the CHC created an environment of crisis where the staff started to feel the pressure of its funder to meet this goal. In the beginning, without a clear strategy about how to handle the issue, the team had strong concerns about their ability to meet this expectation. However, once the QI team started to break down the issue into manageable PDSAs, they could see that QI provided a method to address what seemed like an overwhelming task. While not all of their PDSAs were successful, the team started to embrace failure as a learning process to discover what didn't work and could focus on where to move the work next. This experience started to cause an increased level of trust amongst the team.

With the QI team focused on improving the panel size and seeing an improvement in the team dynamic, this gave the leadership team an opportunity to step

back and start to assess what some of the broader cultural issues were for the staff team as a whole. With some many of the work processes being addressed by the QI team, leadership had the opportunity to look at some of things that could be addressed on an organizational level to improve the broader work culture. Kotter's theory addresses dealing with the no-nos or "highly skilled urgency killers" (p.146) which we had at NFCHC and they were influencing the environment of QI that we were interested in implementing. As measures to marginalize the effects these people were having on the broader team, NFCHC leadership made some of the following changes: a push to be data driven (p.148), identifying staff who were not interested in implementing efficiencies (p. 149) and removing unsupportive staff from the QI team and roles of influence (p.163). Ultimately, these actions solidified the team and removed barriers that were created by human negativity. These phases of development define the positive progress of the QI team at NFCHC. This isn't to say that the process is complete as there will always be ongoing improvement work to do

In conclusion, from continual observation of the team, I have noted several things that may concern future direction of QI work within NFCHC. As they have become increasingly comfortable in dealing with work issues that create conflict within the team. They rely heavily on data to inform their decision making process. As they have come to trust their ability to create, implement, and adjust PDSAs accordingly, their ongoing sense of urgency about QI work has dissipated significantly. On numerous occasions, team members have noted this as a problem as it makes the work seem more routine and less exciting. Over the long term, this could lead to complacency and less dedication to the work. The team could benefit from some of the strategies within Kotter's theory to create a sense of urgency in the day to day work including: move with speed, speak with passion about urgent issues facing the team, don't just talk but do and be as visible as possible to the broader team with the work (p. 116-117). These elements could assist

with the continual high level of investment in QI work moving forward. Kotter's sense of urgency should exist within every level of Bronfenbrenner's ecological model for the successful implementation of any mandate within the health system. In this case, the MOHLTC has pressure to implement efficiencies within the system and passes that pressure on to the leadership structures of HSOs. As a part of the leadership structure, I feel this sense of urgency to work with my team to implement the mandate and report back its success. Finally, the team also feels this urgency and has to translate into their daily practice so they, in turn, can report on its success to me. Kotter's sense of urgency actually demonstrates the cascading pressure to implement new mandates across the health sector.

Case Description – The Context

NFCHC has had a QI team in place since 2013. The main objective of this team was to create and implement improvement initiatives that would be reported to HQO and the local LHIN through an annual QIP. Prior to the MOHLTC mandate for QI in HSOs, NFCHC staff had not shown any interest in doing this type of work. However, with this permanent mandate, NFCHC decided to pursue a better understanding of QI through the engagement of an expert. With knowledge and successful practice, staff began to show in increasing interest and engagement around QI practice and implementation.

While there has been some staff turnover in the QI team over the past three years due to staff leaving for other organizations and the onboarding of new staff, the team has had a consistent nurse practitioner leader who has been a dedicated staff member and leader of the QI work. This leader will often spend extra time analyzing data and assisting in the explanation of QI projects in detail to staff members who are not part of the team in an ongoing capacity. She also has the responsibility of writing and submitting the annual QIP. The medical receptionist is also a long time team member and demonstrates careful attention to detail around PDSA cycles and data collection.

She volunteered to collect ongoing data for the QI initiatives that are reviewed at monthly meetings and can provide insightful feedback about how the QI work impacts patients as she is their first point of contact in the organization. The registered nurse has been part of the team for two years and is always willing to write up PDSA cycles and make repeated attempts at work flow processes until they show improvement. The IT support person has also participated with this team for last two years. She is very knowledgeable about CHCs in general and brings helpful feedback from across the CHC sector giving the team insight about how work is completed in other CHCs. Other team members, including the physician, are fairly new to the team but show an eagerness to learn the theory and participate in the problem solving and strategizing discussions.

The executive director was also interviewed as part of this project. The idea to embrace QI at an organizational level was his idea initially. He was able to bring a broader perspective around the importance of aligning with health sector mandates. The leadership perspective demonstrates the investment across the organization in QI and addresses the need for top level buy in for real change to be initiated across the CHC.

The team members show a level of dedication to the improvement process that exceeds casual interest. There is a collective motivation to improve the way that primary care is practiced in this particular CHC setting. They have obtained enough success to know that their efforts directly correlate to improvements in their day to day practice. They have presented their work at a local conference and a CHC provincial QI learning day. Several other CHCs have inquired about their process and one CHC in another LHIN has come to spend the day at NFCHC to learn about how they operate.

As detailed in the methods section, team members were asked through a semi structured interview process (Appendix F) to provide insight into their own knowledge about QI. Also they were asked questions about the details of the team's interactions

and how this impacts the outcomes in QI. What follows in the next section is a breakdown of these themes.

Thematic Overview

Themes highlighted in my own reflection as program director that were captured prior to the interview process with staff, align with Kotter's theory of organizational change through a sense of urgency and include: bringing in expert help, creating a strong sense of need, looking for continual opportunity and removing the staff who are continually negative about changes in the organization. These themes were incorporated with the themes from the staff interviews and placed within the ecological framework at the mesosystem level. There was some overlap between the two sets of themes and this is explained in detail in the discussion chapter.

Through the interviews with the QI team members, IT support and the executive director the following five key themes and subsequent sub-themes emerged as the predominant factors that have led to success for the QI team at NFCHC. Table 1 summarizes these themes from the interview process. What follows is a detailed description of each theme with supporting quotes from the interview to provide a better understanding of each element.

Table 1
Summary of Major Findings for Interviews of QI Team Members

Main Theme	Sub-Themes	Summary of Themes
Supportive Management	<ol style="list-style-type: none"> 1. Hire an Expert 2. Give Dedicated Time 	This theme highlights that for this team's success, it is important to have organizational management embrace the idea of QI and provide structural elements that both support and push the work forward. This includes being open to feedback.
Safe Spaces	<ol style="list-style-type: none"> 1. Communication 2. Big Picture Thinking 3. Accountability 	This theme outlines the need for this team to have a psychologically safe work environment that allows for difference of opinions and seeing things from different viewpoints. It also embraces failure as part of the learning process and promotes openness to new ideas. Individuals feel like their ideas are valued and listened to without judgement.
Ability to Embrace Collective Change	<ol style="list-style-type: none"> 1. Pressure to Perform 2. Value Adoption 3. Data Driven 	This theme illustrates the ability of NFCHC to bring change to both frontline work processes and leadership's operational goals. It outlines motivational factors for this team that assist in tackling new work and getting processes right.
Signs of Success	<ol style="list-style-type: none"> 1. Positive Experience 2. Competition as Motivation 3. Right Tools 	This theme demonstrates the importance of evidence and data to support the continuation of the QI work. This success helps to motivate the team to continue to apply themselves to the ongoing process of improvement which will never reach completion.
Collaborative Environment	<ol style="list-style-type: none"> 1. Multidisciplinary 2. Inclusive/Open 3. Owning the process 4. Patient Care as priority 	This theme describes the necessity of respectful teamwork when approaching and implementing QI in the work environment. The ability for the team to self manage and choose projects that most interest them are crucial to this work.

Theme 1: Supportive Management

One of the main themes identified by the QI team members was supportive management. This was identified in numerous ways by staff including one comment of “having someone who leads the way” which referred to the staff QI lead who was identified and put in place by the leadership team, who coordinates meetings and creates agendas. This person also manages the feedback from other staff and brings issues from different disciplines within the team to the QI team’s attention. Having a lead staff person who leads the work on a daily basis ensures that “that they [leadership team] don’t mind the time it takes to get involved” when improvement issues require dedicated managerial time in specific cases. Leadership has time to address specific requests since they are not required in daily efforts around QI which helps in bridging the gap between frontline staff and management when asking for the necessary supports to do the work.

In addition to appointing a staff leader, the organizational leadership was also identified as having an influence on QI. Staff members felt it is important to have support from their manager in the day to day work that they are doing and the ways they are working to improve it:

From a staff perspective, like the frontline people, I think it shows us that we are valued from leadership.... They are open to the changes that we’re talking about. So we feel more valued as frontline, therefore that flows into how we go about our day and care about our patients. Because we feel like we are valued.

As outlined by one of the medical receptionists, the leadership structure of the organization needs to “buy-in to the concept” of QI so that additional resources can be directed toward the initiative when it’s needed. For example one leadership member stated, “I am going to take my money and hire another [person] for a whole year to help us through the process..... I was to put whatever resources we needed to be able to get

them what we need.” This shows that within the leadership structure of NFCHC, there is a willingness to support both QI and the staff who are doing the work by providing resources to because as one of the nurses noted “if the bosses are not buying in, nobody’s buying in.” In addition, as the QI lead noted, there was a willingness at the beginning of the process to actually “involve the people who are doing the work so there were changes, not just in processes, but you can also see changes in culture.” This leads to high staff investment in the work as one team member put it:

I think we just have really good staff buy in. I think it really does start from the top, I think our QI lead is someone who is very involved, and it was a good person to pick because she is in the primary care position. Which sometimes I think in an organization that people make decisions without knowing the effects that it has on other people, but because she is right there, I think she’s a great person to do that. She sees what goes on so she knows what needs to be fixed.

This kind of support points to the further sub-themes that are about resource allocation for the benefit of the staff which include 1) hiring an expert and 2) giving dedicated time to do the work.

Sub-Theme 1: Hire an Expert

As part of the broader theme of supportive management, the willingness to hire an expert was something that everyone interviewed identified as being a key factor for the success of the team. QI has a considerable amount of theory and specific tools attached to how it is implemented so “another pivotal point in this process was that we hired a consultant to help us” as outlined by leadership. After navigating the first QIP submission, it was very clear that NFCHC required the knowledge of an expert to learn what it didn’t currently know about QI. The expert in this particular case had experience in both QI implementation through HQO and with the CHC sector. This skill set ensured that the expert understood the CHC environment and how it is different from other primary care models. Her previous experience with CHC teams demonstrated that she

was a proponent of the CHC model. This helped to win the buy in from the team. These were key attributes in facilitating success.

Having an expert provided a focus and purpose to the work so that staff could concentrate on learning the concepts around implementing improvement changes. It legitimized the work and it was easier to see how this type of work could bring real sustained change to processes in primary care. The expert was described in this way by a medical receptionist:

She was a great leader, I think that it was just really easy to buy into something that she would talk us through step by step on how to do things, so you knew that you were working for something that was going to be best for everybody. It was just really easy to buy into it.

Having an expert provided support for a team that was new to this type of implementation task. She was able to teach the team how to use various tools that gave meaning to the work. She was able to motivate when some of the work failed by redirecting efforts to a better area of focus. As a team member pointed out:

I think she just kept people on target, and explained things when people didn't understand the how or the why.....she was the one that started the run charts, and just giving the visual, so that people could see where they were at.

The management decision to invest in ongoing expert advice helped to provide a sense of security within the team. The staff knew that they were going to have an individualized education on QI concepts that would be customized to their specific work environment. The fact that this support was ongoing and not just for the beginning stages assisted in allowing the team to feel that they were well supported and had appropriate assistance in creating a QI program.

Sub-Theme:2 Give Dedicated Time

NFCHC considers QI something above and beyond the tasks in any given job description. Additionally, not all healthcare providers are educated in the practice of QI so time needs to be invested on the frontend of implementation to ensure that everyone

understands the work the same way. So another way in which the management structure of NFCHC supported their team was to provide dedicated time that is just for QI purposes. As a member of the leadership team described it:

They were given the time. At the beginning, there was time. We were not taking it out of their administrative time. It was extra time. That helped because you don't say, 'Ok, we asked you to use your very limited administrative time to go on with this. I think that providing that type of organizational support helped.

By doing this, the work associated with QI does not move down the list of things that the team will get to when there is extra time. Staff members do not have to choose between completing the administrative tasks associated with their regular duties and focusing on a QI project. No one is expected to work beyond their regular hours to bring quality to the organization. Participants outlined that this commitment allowed for the understanding that QI is an important priority and it is important enough to set aside valuable time to address properly.

Theme 2: Safe Spaces

The theme of safe spaces was repeated in every team member interview. This was discussed using different vocabulary within interviews, but all the words point to the same idea which was that staff members need to feel as if there is a degree of safety within the team to share ideas or talk about difficult issues. This type of environment includes One team member spoke about “an outlet to really be able to voice your concerns and fix things in a safe manner, because there's no judgement and everybody brings ideas to the table.”

From a leadership perspective, this was an area of focus on across the organization. Staff concerns were addressed quickly and plans of action were put in place to address concerns of tension among staff. Additionally leadership made a concerted effort to be transparent about organizational decisions and to communicate broadly about any changes made within the CHC. Staff members were continually

invited to voice concerns or share ideas. Over time, this work started to pay off. As a physician stated:

We all generally really feel it's a safe space to work and I think that's the most important, you don't feel like you're going to go in there and voice your opinion and get into an argument. You feel like everybody is going to be positive about it.

The team was able to view a difference of opinion not as personal conflict that couldn't be addressed but as an opportunity to see things from a different point of view and address issues that might concern one team member but not another. A medical receptionist described the experience this way:

I think we don't always all agree with each other, but that being that we know it's a safe spot to bring up ideas, it's kinda like no judgement, everyone throws it out. I think that is because there is a different member of each department that everyone brings a different perspective.

This type of safe environment can be expanded upon and characterized by some of the sub-themes identified in this area which include 1) good communication, 2) ability to do big picture thinking, 3) being accountable to one another for the work.

Sub-Theme 1: Communication

This sub-theme includes the various methods of interaction and sharing information both within the QI team, the broader clinical team and from leadership to the staff. With so many small changes being tested in an attempt to bring about improvement, there is lots of opportunity to communicate. As well there are many details to share regarding how the work is done and the feedback about the outcomes. Even when the work doesn't happen the way it was planned, the team looks to their communication to see how things could have been improved. The medical receptionist described how the team addresses work that doesn't go well this way, "...we think we're doing it one way and then somebody else does it a different way and then you are like where did that communication fail? Where did the process fail?" This kind of reflection

demonstrates that the team is willing to be critical of themselves and work to improve how they communicate with each other to improve their process.

With improved communication, everyone is aware of the status of work projects and communication can flow freely. One team member stated, "It's just an openness to communicate with each other and the willingness to make changes and to be open to changes, and trying things and failing and trying again." When the team is non-judgemental and that is enhanced by good communication, it appears to have helped to solidify a safe work environment.

Sub-Theme 2: Big Picture Thinking

This theme outlines the ability to see a situation from more perspectives than one's own. The participants outlined that this is the ability to understand that how one person sees a work process may be very different than someone else involved in the work but who holds a different position. Additionally, there may be others who this process affects, such as patients, and the team may need to step outside of their clinical role to see how a change in process may affect those individuals. In a safe work environment, everyone has to feel like they have the right to express an opinion about any attempted changes.

Employees outlined that they wanted to bring about a change in work flow that improves their personal work experience. However, there is always a chance in a team environment that the change for one person may disrupt the work of another. One team member reflected:

So I can see how we are thinking more in the bigger picture now because we work for so many different people and we see how it affects the other team members more than when we are doing one specific thing, you only see how it affects yourself.

According to the team, the ability to see a broader perspective helps to create a safer work environment that supports a variety of perspectives and encourages increased communication for maximum engagement from the staff performing QI work.

Sub-Theme 3: Accountability

From the perspective of the participants, it was clear that the outcomes of improvement work require accountability. The annual QIP reporting was outlined as having a built in accountability structure. HSOs are required to provide a progress report of the outcomes of QI targets that they set for themselves the previous year. One team member's comment of, "I think we as a group hold ourselves accountable" suggests that that kind of accountability is happening at NFCHC. Team members hold each other responsible not only for the follow through on purposed PDSAs and their implementation but also hold themselves accountable to reach purposed targets. The clinical team made the decision to publically post their quarterly performance rates of MSAA indicators in various areas of preventative care. As the IT staff member observed:

We broke down (data) to see everybody as an individual and that was a bit of a wakeup call too because then you were accountable and you could say 'well if so and so is doing so much better - how do I get better at this?'

This act of accountability was not required by leadership but was suggested as a move toward collective accountability. As stated by one participant, "I have to be accountable. We're accountable to each other on the team and to our patients, because ultimately our decisions impact them."

This kind of desired accountability between team members speaks to a commitment to contribute to a safe work environment where colleagues commit themselves to constantly striving to improve their individual and collective work.

Theme 3: Ability to Embrace Collective Change

The third theme that is common amongst the staff was the notion of embracing change. Participants indicated that change needs to happen to bring about efficiency and gains in work processes. As described by one team member, “I think it was the right people and it was the right time. The staff members were willing to make changes in a positive space.” This follows the idea of good communication in combination with a positive culture. One of the newer members of the QI team speaks to this in comparison to her former healthcare work environment, “I feel like the environment here is way more supportive and its part of the culture here to get together and hash things out.” This willingness to tackle issues allows for making adjustments in how things are done.

After considerable staff changeover, NFCHC was in a better place to address things that needed to be changed. This required members of the team to connect with one another and work collectively. It is one of the important attributes of the current QI team as described by one member, “I’d say openness to change, learn, improve, good communication, ability to think outside the box, willingness to participate in a good setting, not feeling inhibited with the idea sharing.”

Important elements of this type of change are outlined in the sub-themes that were also identified in most team interviews include a 1) positive pressure to perform, 2) an increased commitment to the organizational values that guide the work of NFCHC and 3) becoming an organization that is increasingly driven by data to make informed decisions in the area of improvement.

Sub-Theme 1: Pressure to Perform

New initiatives can be exciting and impending deadlines are great motivators. When QI was first unveiled at the CHC level, there were very tight timelines to accomplish the initial tasks of creating a plan. As the present QI lead recalls, “We had

very short notice....in December they told us that we were going to do that and then we were supposed to have a plan by the end of March.” The immediacy of the request was urgent and NFCHC had to act accordingly to achieve the targeted goal. QI was prioritized over other projects in order to create a baseline plan that could be built upon. This pressure also helped to reveal some of the weaknesses at NFCHC and sent the team looking for information and expertise to address what was lacking.

QI work can be tedious in its research and implementation phase. Participants outlined that it is hard to sustain the necessary urgency to propel such work forward. It is easy to let up or lose traction in projects, if there is no end in sight. However, broader circumstances within the organization have served the purpose of creating pressure to push projects along. One example was a mass clinician exodus in 2015. The team had been doing QI work for two years, and the perceived pressure around the work had waned. However, when three physicians left the team within a three month span the team was once again in a heightened state of pressure to perform its primary care duties as efficiently as possible. As one team member recalls it, “We had a hard summer. Our QIP lead was unavailable and the work died off. But we have to meet requirements so dropping off is not really an option.” It is events like this that come along to create the necessary urgency described by Kotter to get the team back on track and do the work. The team was motivated to change practice to keep up with the demand for care with far fewer staff to do the work. This proved to be a great motivator for change and is probably the best example of Kotter’s sense of urgency at work at the team level.

Sub – Theme 2: Value Adoption

The NFCHC board of directors rewrote the organizational mission, vision and value statements in its strategic direction process in 2013. This process adopted five very specific organizational values and started using them as guiding principles in day to

day work. These values included being: passionate, inclusive, accountable, engaged and respectful. These values have guided hiring practices, performance appraisals and QI practice.

The values are visibly hanging in every room of the CHC. They are talked about regularly in staff meetings and strategic planning sessions. These values have become part of the culture of NFCHC and assist in driving change. When there is a discussion about changing things within the organization, the conversation shifts to whether the proposed changes are reflective of the values of NFCHC. This also holds true for discussions around QI. One team members states, "I think most of us really believe our values, so I think most of the people really want to do best by the patients." This helps to drive the changes that need to be made, if the changes are reflective of the NFCHC values and will be improvements for patients at the CHC. As the IT person noted as something that makes the team stand out, she commented, "Values, I think they all care. That's the bottom line is that they all care."

Sub-Theme 3: Data Driven

A specific aspect of managing change at NFCHC is a focus on data. A member of the leadership team noted, "we started to rely of data instead of relying on perception. We had a moment where we discovered that....perception can be influenced by outside factors."

By requesting the data that shows what actual work is happening, individual practitioners know what their actual work outputs are and can compare the work to the outputs of their colleagues. This was outlined as allowing for important learning moments where team members could share how they make their own improvements to their daily work and assist others to achieve the same outcomes. This is particularly important in achieving the non-negotiable care targets for things like offering preventative cancer screenings. As described by the IT team member, "showing the data

and trying to get everybody to understand why we have to, or why we should try to meet these targets” assists with making necessary adjustments in practice to achieve the NFCHC’s collective goals for these markers.

NFCHC’s push to better understand their own data has had some positive impact that has resulted in improved service from their IT services which are contracted from another CHC. As the IT team member reported, I find myself more willing to do extra reporting for this site. I find I’ll put aside the time to make sure that they get the reports they need.”

Following data carefully gives the team immediate feedback on their progress. They can know if their predictions are proving to be true or if they need to make changes to their work practice. As one team member stated, “They follow the data carefully, and we’ve been able to adjust to meet indicators through their work.” In this way data helps to drive change that is supported by evidence rather than just perception. It makes it easier to get everyone on board to make the necessary changes once there is solid evidence supporting proposed changes.

Theme 4: Signs of success

The fourth overarching theme identified by the NFCHC team as something needed to assist with the implementation of QI in their environment was signs of success. The expert hired at the beginning of the QI implementation continually encouraged the team to work on what she called “low hanging fruit” so that they could have a certain amount of success early on that would help with the investment from staff in the process. While this is something they did do at the beginning, failure is also something that NFCHC has learned to embrace in QI. So much of what the NFCHC team attempts does not yield the improvement early in the process. However, a disproportionate amount of failure over success can take its toll on a team. Success can be measured in various ways and all of them are valuable. All members of frontline staff noted that they required some signs of success in order to keep them interested in

continuing the effort of QI work and this has been easier to do the more experienced the team becomes as they are better predictors of outcomes and know where they can better achieve lasting change. As one team member described:

I think we do good work. The procedures of the change that we've worked on, we work on them until they actually succeed. You see this constant success so it makes it easy to stay on the team when you are succeeding at what you are doing.

However, the team has also broadly identified what they see as success for the team and this broad terminology includes a number of sub-themes: 1) that the work feels like a positive experience, 2) that team can be motivated through an element of competition among their colleagues and that 3) success is aided by the availability of the right tools to do the work.

Sub-Theme 1: Positive Experience

The NFCHC QI team enjoys the practice of QI. One team member described the work in this way, "It's really exciting, it's fun, it's innovative, it's non-threatening." QI gives practitioners different types of work processes to problem solve. It's a change of pace from their regular work flow and can stimulate new ways to think about how they perform their work each day adding interest and a change of pace to the busy flow of a daily primary care clinical setting of seeing a large flow of patients.

From a management perspective, there has never been an issue with having enough people involved in doing QI work which suggests a certain level of interest and satisfaction in the work. Without exception, everyone who has been asked if they would like to participate has agreed. At one point, the team had an over representation of physicians at the table and they had to agree to rotate at the table so as to not overwhelm the other team members. As one team member noted about her teammates, "To me it means that they all like their jobs and they're all happy being here."

Sub-Theme 2: Competition as Motivation

As mentioned earlier, part of the required QI reporting each year is about how well our providers perform at offering a number of different diagnostic tests around cancer screening and diabetic care. The data on this aspect of the work can be drilled down to see each specific provider's work performance. The clinical team started requesting this information on a monthly basis so that they could see how they were performing against their peers. After sharing this information with the team, they came up with the idea to post these monthly statistics publically in the clinical area so that it became public information. This is something that the leadership team would not have done as a top down management technique. However, the team thought that it would help. As one team member said, "it seems to motivate the providers. Sometimes it can even become a little game, a little bit competitive."

This observation proved to be true. The team enjoyed the feeling of competition especially since it was done in a supportive way where team members could learn from the best performers as to what they were doing to achieve their results. By adopting some of these work practices which included: better charting practices, using a collective spreadsheet to track testing and keeping detailed lists of patients requiring tests, the whole team achieved better outcomes. The team continues with the practice of publically posting their data which shows a gradual but definite improvement over time. This act of placing visual evidence of performance is also a strong sign of how this success is part the broader organization culture of NFCHC. Schein speaks of artifacts that are outward representations of the culture, these public displays for performance data demonstrate an organization value of success within the NFCHC (Schein, 2010).

Sub-Theme 3: Right Tools

Part of being successful is having the right tools to do the job well. The team mentioned several tools in particular that helped them implement QI effectively over the

last several years. Leadership mentioned the following, “It’s not easy. It can be small or new. But, it gets complicated very quickly. Process mapping was a real eye opener.” Process maps help the team collectively break down a current process from all staff viewpoints to see where the inefficiencies are. The team broke down several work processes over the first year to get a good baseline on how work was being performed to see if there were some obvious places for improvement.

The team also learned how to effectively perform an effective PDSA cycle where the team can collect data on a small test of change to see if a purposed idea will actually bring about any real improvement in the work process. One team member explains:

There’s one tool that I use all the time. It was brought to us from the QI expert was here. It’s the PDSA, the Plan-Study-Do-Act cycle. It’s an outline that you can plug stuff into....I save them to the QIP file, and then if we ever have to go back we can say, ‘Why didn’t that work?’ or ‘What was the actual outcome of that?’

The final tool that was mentioned in several interviews was the ‘What Bugs Me Board’ which is a large white board that hangs in the main hallway of the clinical area at NFCHC. The QI lead described its use in this way:

If there’s something that’s really irritating you or something that is just not right, if you write it on the board you own it. You put your initials, and then we decide are we going to take that process through QIP, are we going to take that to Clinical meeting, where are we going to take it, so we are not sitting there with pages and pages of things to address and never getting anywhere.

This board allows for identified issues to be addressed in a timely manner and makes sure that they go to the right people to be worked on. This gives every team member a way to bring up frustrating areas of their work that could be improved upon with a group effort. It also gives everyone a sense of autonomy over the direction of improvement.

Theme 5: Collaborative Environment

The final major theme to come out of the interview process was the idea of a collaborative work environment. In some ways, the CHC model is well suited to this

collaborative work because the team is less hierarchical than in other models of health care. NFCHC tries extremely hard to bring team members together in a way where every voice is valued and there is equity about how the work is discussed and implemented. Every opinion is valued and has weight in the design phase of PDSAs and the eventual implementation of change process. Many of the NFCHC staff members have worked in other health care settings where this type of non hierarchical environment is not the norm. There had to be some re-education of staff to get a better understanding of how this kind of environment works best. One of the nurses described the previous process at NFCHC like this:

I was doing something, our other nurse was doing something, our nurse practitioners were doing something else, and we were making decisions without actually looking at the big picture. How does it affect reception? How does it affect us? How does it reflect social workers? Now, we work as a team.

With improved communication and some team coaching from management, the team was able to improve how they worked with each other on work processes to implement improvement changes. The current team environment was described by a team member in the following way, “The team dynamic is really open and I don’t really get a sense of people with their own personal agendas, there’s really like a sense of wanting what’s better for the team.”

This idea of collaboration can be broken down into four sub-themes that further describe this type of team including: 1) it is multidisciplinary, 2) it is open to anyone who is interested in the work, 3) the team owns the work and 4) patient care is a focused priority for everyone around the table.

Sub-Theme 1: Multidisciplinary

The first sub-theme that was best described by the participants is that it is truly multidisciplinary. There is a representative of each clinical discipline at the QI table participating in the discussion and related work. In addition to the clinical positions, there

is a representative from leadership, allied health and medical reception. A team member describes their NFCHC QI team in this way:

The other strong piece for the committee is that it's cross-sectional because we have an NP, we have a physician, we have a nurse. So the people who may be effected by the work we do at least we have someone on that committee that can speak to that specific program or piece.

Primary care teams are often multidisciplinary and many of the NFCHC staff members have worked in such teams. One team member outlined their previous experience the following way:

We always focused on a multidisciplinary team, but in reality I feel that the multidisciplinary team doesn't have the same respect as it does here in the CHC. I think teaching them that we all as a team, have something to bring to the table and how leaps and bounds, actually, can be made.

Participants outlined that the NFCHC attempts to give value to every voice in the process no matter what staff position the staff member holds. This assures that there is input on change ideas from every perspective. This enables the team to look at purposed changes from every vantage point to make sure that the change is to the benefit of the whole organization.

Sub-Theme 2: Inclusive/Open

The next sub-theme that is representative of the QI team is that it is open and inclusive. All staff members are kept aware of what is happening in QI at NFCHC. There are regular staff updates at the monthly staff meetings so everyone knows what is being worked on at any given time. PDSAs can be done by any of the staff members even if they are not part of the QI team. Management often implements changes across the organization by trialing new changes to process through PDSA. This also makes it possible to interchange clinical and allied team members on the QI team table so that the work can be shared or can continue in the wake of an unforeseen absence. As stated by one participant:

Anyone is welcome to be on the team, and I think people can, you know, if a person is in the team, they're welcome to withdraw or, within the team, if you want to participate on a certain project you can, if you don't want to that's fine.

NFCHC talks about QI a lot and there is a sense that is part of everyone's job description to be part of improvement initiatives in the work environment. Any staff member can make suggestions for improvement projects or bring up areas that they believe need attention or to be improved. One team member speaks about the inclusive nature of the team this way, "It's really like an open door policy. We have the white board downstairs. Everybody on staff is welcome to write any questions, concerns they have." This allows for everyone to feel part of the team and part of its work.

Sub-Theme 3: Owning the Process

The third sub-theme of collaboration is the ability for the staff members involved in QI to take ownership over the work being done. At NFCHC, management felt like there would be bigger commitment to change ideas that came from and were overseen by the people that were doing and were affected by the work. This applies to staff across the organization. The results of this approach are described by one team member this way:

I feel even my team members that are more resistant to change are more open to it, because it's coming from the multi-disciplinary team. It's not just coming from the leadership perspective. It's coming from all of us. I can speak with my fellow nurse and I can say, "This is why we're going to do it this way." She's like "Hey, that's great," whereas it might not have come across that way if someone else dictated that to her.

The team can take time to focus on the things that they themselves have prioritized as being important to their own work. They do not feel like they are simply working on someone else's priority or spending precious time on initiatives that they care little about. The team also fully owns both the failures and success of their time and energy.

Sub-Theme 4: Patient Care as a priority

The final sub-theme describing the collaborative environment at NFCHC is that patient care is a priority for this team. From a leadership perspective one of the most important shifts in the staff culture of NFCHC is the increased focus on patient care. In the beginning of the QI process at NFCHC, some staff members are more invested in making improvements that simply made their own work easier to manage. It was rare that the conversation was about what made the most sense for patients. Now it is a common experience for the QI conversations to be focused on things that improve the experience of the patients. One team member explained it this way:

I think that most of us really believe our vision statement, so I think most of the people really want to do best by patients. Mostly I think it was just the right people, it was time for change, it was the right people and it just worked out.

While some of the QI work may seem small and based in basic work processes, it is addressed as work that will improve the functioning and efficiency of NFCHC as a whole. One team member described it this way, "I would say we are all fighting for a common goal. I would say that we all have passion to do what is best for the Centre and to make us the most effective." This collaborative way of working has moved the team closer to common goals. With increased big picture thinking and the values of the organization helping to shape how team members do the work, the goal is to make NFCHC the best organization it can be.

Chapter 5 – Discussion

This research project was designed to evaluate the elements that affect a primary care team in its attempt to implement a quality improvement initiative in daily clinical practice. The specific intent was to answer the research question of: “What elements do the NFCHC QI team identify as key factors that impact their ability to effectively use quality improvement strategies within their clinical practice?”

It is important to note that this is a retrospective project focused on a work process that happened previous to this research. This is not commentary on work that happened during the research stage of this project. The NFCHC was under a provincial mandate that began in 2013 to implement a QI program within the organization and report back on its progress on an annual basis. As a result, the leadership team at NFCHC had the staff trained in QI principles and gathered a multidisciplinary team from across the CHC to lead the QI work. The outcomes of this work are reported back to the MOHLTC annually.

In my own reflection about this team, I realized that our process of QI implementation within the CHC closely followed Kotter’s theory of a sense of urgency about change management within organizations. It is important to note that this change management strategy of sense of urgency is not particular to implementing QI but also any mandate that comes from the system level to the frontline implementation level. Knowing NFCHC’s limitations, the leadership team brought in a QI expert to educate the staff and assist with the implementation of the first year’s QI plan. Next, we translated the MOHLTC’s mandate into a daily sense of urgency for the organization. In doing so, we created a focus and level of importance around QI implementation that helped to motivate the staff with the process. Thirdly, we embraced crisis, like the panel size project, and turned those moments into opportunities for collaboration and success

within the team. And, finally, leadership intervened with staff members who were not positive influences on this team process. This included dealing with conflict among staff members directly, replacing some staff positions on the team and addressing cultural characteristics that were negatively impacting the staff's functioning as a whole. This four step approach closely mirrors Kotter's theory. This personal reflection provides a broad context of the environment that this QI team is operating within and factors that affect them.

The next part of the research process was interviews with six NFCHC staff members that worked directly with the QI team including the executive director, IT support and regular QI team members. The interviews were conducted, transcribed and, coded. The data, coded themes from the interview transcripts, revealed a number of factors that influenced this team's ability to achieve success with their implementation of QI. This coded data translated into five broad themes and 15 subthemes that included the following factors that led to success: supportive management with the subthemes of hiring an expert and giving dedicated time; safe spaces with the subthemes of communication, big picture thinking and accountability; ability to embrace collective change with the subthemes of pressure to perform, value adoption and being data driven; signs of success with the subthemes of positive experience, competition as motivation and the right tools and; collaborative environment with the subthemes multi-disciplinary, inclusive, owning the process and patient care as a priority. These themes were elements that affected the NFCHC QI team and the leadership structure that guides the whole organization.

Ultimately, while the research question seemed simple, the information and resulting data did not answer the question fully on their own. At first it seemed as though because there is a lack of research in the area of QI implementation in primary care, there was no previous research to compare the findings with to see if this team's

experience falls in line with existing data about QI implementation. However, the findings are more transferable to other primary care models if what is important is how Kotter's sense of urgency works with the existing theoretical framework of Bronfenbrenner's Ecological Model of Development to give a conceptual vocabulary to organize this data in a meaningful way. Bronfenbrenner's Ecological Model of Development was used as a lens to organize and view this data by looking at multiple environments that impact the implementation of the QI work with this particular team. This model provides a way to view the outcomes so that it can be discussed in a meaningful and impactful way by giving it context for primary care. Overlaying Kotter's sense of urgency shows how the drivers within the health system create pressure to motivate change.

Uri Bronfenbrenner's work originated in the 1940s as a method for addressing the childhood development of individuals (Bronfenbrenner, 1995). What emerged was the Ecological Systems Theory that mirrored "a set of nested structures, each inside the next like a set of Russian dolls" (Bronfenbrenner, 1977). Within this theory, numerous layers emerge as environmental factors that impact in the development of an individual including but not limited to: microsystems, mesosystems and macrosystems.

It stands to reason that these types of environmental factors could have a broader application beyond just individual development to the development of individuals in groups or teams and, in this case, healthcare teams. While Bronfenbrenner is studying child development, this concept is also a good fit to be applied to organizational research in relation to team effectiveness in QI, although no previous use of this model could be found in this context. Other areas of health research that have used this model include changes in the implementation of health promotion principles in changing health behaviours in developing comprehensive interventions (Sallis, Owen, Fisher, 2008), and in a study attempting to describe the complexity of community problems that affect

health disparities in low income families in the U.S. (Reifsnider, Gallagher, Forgione, 2005). Therefore, the use of Bronfenbrenner is not new to healthcare, just possibly to this type of application.

For the purpose of this research, the ecological model was applied to a particular clinical team attempting to implement changes through a QI framework in their primary care clinical practice. The QI team at NFCHC, functions within complex ecological systems that influence its development on various levels. This research project was focused on identifying several of these systems and seeing if and how the influences within those systems affect the success of this team in their implementation efforts. Various environments, ranging from the micro to the macro impact the positive development of this team including the current political environment in national and provincial healthcare, the broader organizational characteristics of the organization and the day to day elements that make QI possible at NFCHC. Bronfenbrenner's ecological paradigm states that human development takes place through processes of interaction between the human and the persons, objects and symbols in the environments around them (1977) which can also be applied here to explain the successful development of this particular team. Bronfenbrenner describes these environments from the micro system which includes activities, social roles and interpersonal relationships in a setting with particular physical and social features such as a work place (1988) or, in this case, the NFCHC QI team to the macro system which is a culture that reflects the values of a belief system, body of knowledge or customs embedded in a broader system (1988) or, in this case, provincial governing bodies such as the MOHLTC, HQO and the LHIN. As with most organizations, this team functions within a microsystem that includes activity in day to day work patterns, social roles within the QI team in particular and interpersonal relationships across the broader staff team. The microsystem is an intimate system that includes "physical, social, and symbolic features that invite, permit or inhibit

engagement” within an environment (Bronfenbrenner, 1993). It is these smaller micro elements that were identified through the interviews with QI team and were seen to impact their work as a team and thus their successes at carrying out tasks associated with the QI in their clinic. These elements help to define the culture of this micro team and display the artifacts, values and assumptions that Schein speaks about in his theory of organizational culture (2010). The example of the team wanting to publically post the data of their service outcomes is a direct example of organizational culture at work within this microsystem.

Additionally, the team exists within a broader mesosystem which encompasses the linkages between two or more settings that affect the individual members such as the workplace and then their individual home lives (Bronfenbrenner, 1993). For this application, the mesosystem would be the full organization of NFCHC and its leadership within which the much smaller QI team or microsystem operates. The leadership initiatives that govern the broader organization have a fluid effect on the QI team. This means that leadership decisions that are made for the direction of the organization as a whole also have impact on the QI team.

The macrosystem for NFCHC is also important to consider when assessing the success of this team because the broader structure of healthcare in the province and its priorities filter down to the team level. This macrosystem includes the culture, belief system, bodies of knowledge and the high level leadership structure of the environment in which the organization exists (Bronfenbrenner, 1993). It is at this level that this research project addresses the broader effects of the systemic pressures for quality improvement that have created an environment where there is a definite pressure for all health organizations in Ontario to have a detailed plan that outlines how they plan to improve their organizations. That said dwelling on the particularities of this systemic pressure could have a negative effect on its implementation. If a manager of a CHC

continued to engaged or worry about the validity of the mandates of the MOHLTC it would have a paralyzing effect on ability to implement the process.

This well-functioning team is led by a leadership team that broadly understands the model of organizational change management that is outlined by John Kotter and the elements of strong organizational culture such as those outlined by Schein. By using these management elements in their leadership style they can influence the implementation of a solid QI team. Therefore, culture and change management are both strongly embedded in this particular ecological model that is housed within a much broader political system that is quickly becoming an environment driven by quality improvement policy. Figure 2 depicts the NFCHC QI team within its multileveled ecological system and how the themes identified at each system level work to create influence on this team.

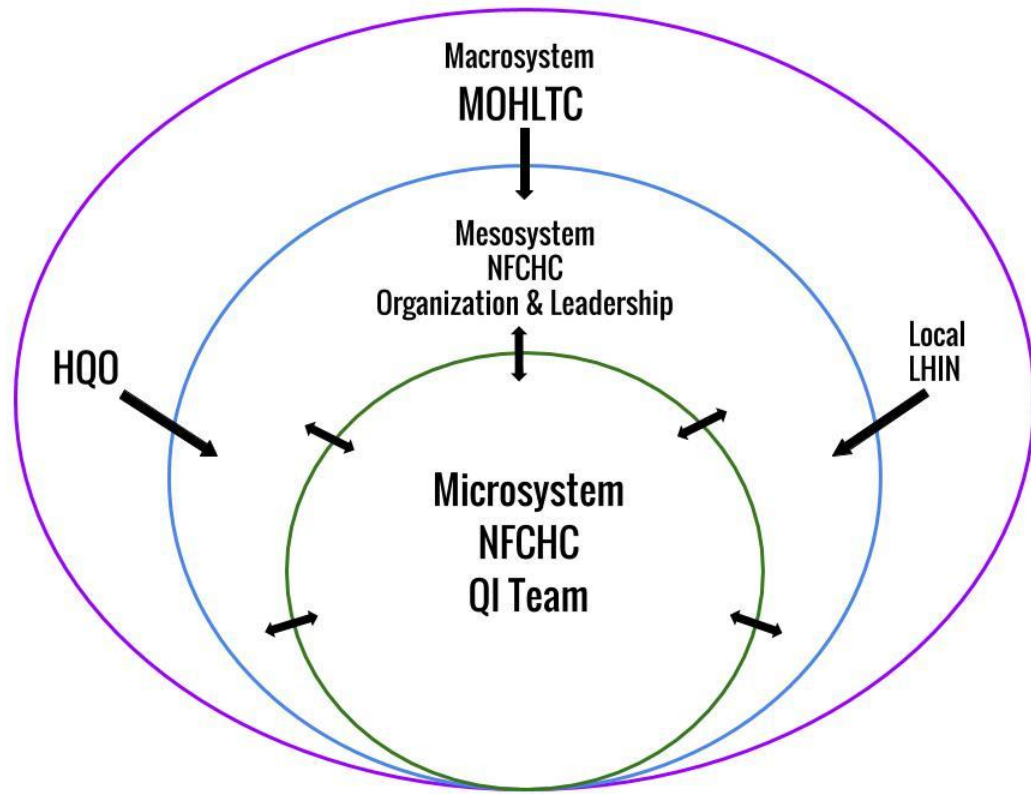


Figure 3. NFCHC's Ecological System

What follows is an in depth discussion of each of the ecological environments that the NFCHC QI team exists within and how a sense of urgency flows from each of those environments to effect the development of this small team and assisted with its successful implementation of QI along with the specific elements within their own small team that are unique to this group.

Macrosystem

With escalating costs, technological advances and increasingly knowledgeable and demanding patients, quality improvement has moved to the forefront of healthcare sector concerns in Canada. In 2013, the Health Council of Canada produced the report *Which Way to Quality?* In which healthcare leaders including deputy ministers of provincial ministries/departments spoke about quality in the Canadian health system. “In

a time of significant cost constraints and change fatigue from ongoing transformation of the health care system, quality improvement can be particularly challenging work” (p. 5). Yet, increased focus and streamlining the process of reporting the outcomes of quality work has started to change how the health system is managing this work.

“In 10 years, we have gone from pushing a quality agenda on the system, saying, ‘You need to think about quality and what does improvement look like to you?’ to the health system now saying ‘This is what quality needs to look like in our health system, and, we need you as a pivotal partner in helping us achieve those ambitions.” (p.15)

The NFCHC is a health service organization that exists in this much broader and complex provincial system. This system sits at an interesting moment in its evolution. In the 2015 report, *Quality Matters: Realizing Excellent Care for All*, Health Quality Ontario observes:

“we did not have a system that had quality care as its explicit core value. There was neither a common understanding of what defines high quality across individual health services and the system nor a road map to get from status quo to the desired future.” (p.5)

This paper outlines the necessity of creating a quality agenda for all of Ontario’s health care system. While it notes that up until this point, quality improvement has been seen as “an issue of culture or structure” (p.10) in individual organizations, it outlines that “system-wide change will require public policy to reflect the quality agenda” (p.10). With Ontario’s *Excellent Care for All Act* “the primary driver of culture change...was the legislation because this is going to be universal, and because it was backed with the creation of a body (HQP) that was to give support to it. The legislation is not just hospital-focused. Every organization that delivers health care services will have to do quality planning.” Suddenly all Ontario health service organizations have QI on their radar. As a provincial mandate, QI will have to be addressed whether there was internal interest or not. Given that the MOHLTC is the only funder of NFCHC, responsiveness to

this direction is necessary. NFCHC is keenly aware that being responsive to mandates is how the organization grows and adds additional resources that help it to meet its own strategic planning goals. In a sense there is a duality in the responsiveness. If an HSO can implement a mandate well, there is more time and resource later to focus on the organization's own priorities.

The climate of change toward collective improvement creates an environment without which QI would not have become the focus that it has at NFCHC. With a mandated focus on quality, NFCHC ended up having to have a reactionary response to the demands of the province. This is not unusual. HSOs often find themselves in a quick response mode when the health system shifts its focus or adopts new mandates. Bronfenbrenner's theory works in this project because it brings to light that there are large scale factors that influence responses that might not have come along on their own in this team's development. With quality priorities from MOHLTC under the supervision of HQO and further supervised in its implementation through the local LHIN, NFCHC needed to be responsive to these quality directives. It cannot be said definitively that the primary care team would not have created an environment of QI on their own at some point with the right champion and additional influences. As a leader within my organization, I do not have the luxury to consider if QI is even the right response to the pressures surrounding health system change. My job is to implement the initiative. However, the macro level push for the whole healthcare sector to adopt quality measures definitely fuelled the direction of this team toward improvement at this juncture in time for better or worse.

Bronfenbrenner gives a reasonable explanation for this by placing this small team's development within the much larger ecological environment whose priorities directly affect all the microsystems within its influence. This provincial macrosystem's priorities, puts direct pressure on this team creating an urgency of response to these

provincial demands. The first observation of influence on this team's success is clear by observing it within this ecological structure. The priorities of this macrosystem have direct impact on the development of the team in mandating its direction to focus on quality. These priorities have a top down influence where the mandates put direct pressure on the mesosystem of broader NFCHC organization and its leadership which, in turn, puts the same pressure on the QI team to operationalize these priorities. However, this macrosystem's directives cannot ensure the success of a QI initiative, nor can it ensure that a frontline team will embrace QI as a positive part of their work. For an explanation around a team's willingness to adopt QI, it is necessary to look at smaller ecological systems surrounding this team and their influence on the team's development.

Mesosystem

Part of being an HSO in the province of Ontario is learning to be responsive to new and changing mandates from the government structures including the MOHLTC, HQO and the local LHIN. Not only are CHCs at the frontline of healthcare service and, therefore, the implementers of strategic directions from higher governing bodies, there is an understanding that expansion of programs and funds come through these initiatives, if HSOs are responsive to implementation direction. This means if NFCHC wants to position itself for growth, it will have to respond successfully to the mandates of the province. This has to be balanced with the experience of CHCs with previous high level rollouts including, for example, expanded physiotherapy for primary care which did not result in positive outcomes. There is a balance to be struck between compliance with new initiatives, managing staff expectations for what these initiatives can bring to the organization, and not misusing organizational resources meant for the primary mandate of the organization which is to deliver service. This is part of the climate of the ecological environment of the broader CHC and its leadership team. Ultimately, the leadership is

mainly focused on creating the most positive organizational culture that can balance higher provincial mandates and the organization's own vision for the daily work.

The data from staff interviews identified several broad themes that describe this mesosystem of management that they operate within in their smaller QI team. However, there was less focus on how they are managed and then how they interact among themselves. This is an interesting, maybe even surprising, outcome. As a leader within the organization, the fact that supportive management and the ability to change is identified is important because it says that I am doing the job I am suppose to do. This allows this team the space to better think about themselves. The fact that they don't have to worry about their management structure means they have more time to do their jobs well.

Supportive Management

The feedback from this QI team is consistent with literature from the area of organizational culture that says that leading successful organizations is about setting the direction and work agenda for the employees so they will know what they are working toward. Schein (2010) says that "the most powerful mechanisms that founders, leaders, managers, and parents have available for communicating what they believe in or care about is what they systematically pay attention to" (p.237). Organizational structures that are interested in advancement in QI pay careful attention to QI both its successes and its failures. Hospital QI research points to the necessity of a reporting structure that allows for failure and error without blame and the ability to discuss mistakes with a quality lens (McFadden, Henagan&Gowen, 2009). Giving validity to QI in primary care would require that enough attention be given to the work but, also, enough space for the work, including the failures along the way, to influence and teach those doing the day to day improvement work.

The implementation of QI at NFCHC was reflective of this type of process of successful implementation in other environments. Management understood that QI was going to be a permanent part of the future of healthcare. First, order of business was to hire an expert. Kotter speaks about this as “bringing the outside in” (p. 60) with “emotionally compelling people” (p. 60). This was identified by everyone interviewed as something crucial for the success of this team. Management invested resource in an expert that made sure the staff at NFCHC became QI experts in their own environment. This showed that leadership valued QI and allocated resources for this work. Additionally, leadership provided dedicated time for staff to do the work. This meant that staff could focus on QI without feeling like it was taking time away from their main focus of providing day to day care.

CHCs have dedicated leadership to set the mission, vision and values of the organization and set the tone of the work being completed unlike other primary care models where the practitioners who are providing care while also attempting to lead their practice. With dedicated leadership, there is an opportunity to focus fully on an initiative like QI and strategize about its implementation. This kind of leadership allows for aligning goals of the organization with the process of QI and the culture needed to support it (Batalden&Splaine, 2002) indicating that supportive leaders influence the integration of QI across the organization and can be identified as a contributing factor. For this team’s success, the data suggests that it is important to have organizational leadership embrace the idea of QI and provide structural elements that both support and push the work forward like hiring an expert and giving dedicated time.

Ability to Embrace Change

The second large theme affecting the mesosystem that emerged from the interview data was the ability to embrace change. This theme is also consistent with literature about change management theory. Managing the culture of an organization is

regularly seen as a fundamental part of system overhaul. This is also true for healthcare although all the research exists in large delivery systems like hospitals. The last system overhaul at the National Health Service (NHS) in the United Kingdom was built on the idea that cultural change within an organization can only be achieved alongside structural and procedural change (Scott, Mannion, Davies & Marshall, 2003). The data from this project suggests something similar because NFCHC has undergone a significant culture change that was brought on in conjunction with procedural changes required by QI and structural changes implemented by leadership where the organization had drive to improve self.

In the case of NFCHC, the provincial QI mandate required change at the organizational level. Research suggests that organizations go through various stages of development over time and different elements will help to sustain this change (Schein, 2010). Sustained change in particular area requires a strategy.

Additionally systems have to be able to assess all of the elements needed for change and understand how they interact and affect outcomes. From a management perspective, it is easy to see how QI at NFCHC fits Kotter's idea around urgency where the goal is to "create action that is exceptionally alert, externally orientated, relentlessly aimed at winning, making some progress each and every day and constantly purging low value-added activities" (p.34). This requires embracing change by being open to boldly changing how things are done on the frontline in terms of work processes and operationally from a leadership perspective. It is a reasonable assumption that culture strongly impacts NFCHC's positive experience with their quality journey, similar to the effect of culture on larger health care systems (Jacobs, Davis, Harrison, Konteh & Walshe, 2013).

Bronfenbrenner gives a structural vocabulary to discuss the impact of the broader organizational characteristics of NFCHC and their management on the

successful QIP team. As a mesosystem, the whole organization can be seen as an environment which encompasses the linkages between two or more settings that affect the team members such as the whole workplace environment and then the leadership team that manages the day to day operation of the CHC and the big strategic direction that governs it (Bronfenbrenner, 1993). Without this theoretical model, it is difficult to incorporate my observations of management strategies used within this organization in a meaningful way that demonstrates impact on the team's development. The model helps to demonstrate how management choices, even those outside of QI, can affect the success of this team's work.

Microsystem

In the final implementation of Bronfenbrenner's theory in this application, the NFCHC QI team forms a microsystem of its own. Each of the team members of the QI team exists in this small environment which has its own way of functioning and characteristics that affect its ability to perform its primary role which is to lead QI initiatives in the organization. This microsystem has elements that affect its operation that include the two main themes of supportive management and ability to embrace collective change that were also identified and previously discussed at the larger mesosystem level. This microsystem also identified three other overarching themes that include safe spaces, signs of success and a collaborative environment as the main elements within their microsystem that encourage them to be successful in the QI work that they attempt.

Safe Spaces

Every person interviewed referred to an environment that felt safe where they were allowed to freely express difference of opinions and opposing points of view. Team members referred to feeling valued and listened to when expressing new ideas. This description supports research in the area of psychological safety which "involves but

goes beyond interpersonal trust; it describes a team climate characterized by interpersonal trust and mutual respect in which people are comfortable being themselves” (Edmondson, 1999). Edmondson’s research on work groups is highly reflective of this team where leadership reflects the elements of effective communication and encourages a high level of accountability within the group dynamic. In addition, there has been an influence from the meso level of management decision making around staffing. Leadership did make changes to staffing within the QI team with staff that were not supportive of the initiative. Overtime this affected the broader team assisting with changing the culture of the broader organization making the whole organization a safer culture for the staff to work in and discuss issues that are of importance to the day to day work.

This idea of safe spaces is reflected in the three subthemes identified in the interview process that include: communication, big picture thinking and accountability. The HQO teamwork primer notes that effective communication in QI teams demands an environment that “fosters respect, creativity, positive interpersonal relationships, and teamwork that depends largely upon both the quality of information shared and the efficacy of communication between team members” (HQO, 2013).

Further research in healthcare teams finds that communication that is facilitated by team meetings is associated with innovation, resolving conflict, developing effective interpersonal relationships and reducing professional barriers (Youngwerth& Twaddle, 2011). This type of communication helps to create a psychologically safe space where all perspectives are valued and heard. It is important to highlight that this reflection from the small microsystem is also integrated with the broader leadership of the organization.

In addition to a safe communication style for the team, big picture thinking was also identified as part of their safe working environment. This idea is about being able to see issues or problems from other team member’s point of view when approaching how

to solve complex issues with QI work often affects processes that touch a variety of disciplines. Without proper communication, it is easy to implement an attempt at improvement that does not take into consideration the workload of all of the people involved in the change or how it might affect patients. An example would be when the QI team was attempting to do a PDSA around improving access to physicians but ended up overwhelming the triage nurses during the implementation.

Finally, the last part of creating the safe spaces is about creating accountability with team members. Edmondson (1999) also speaks to this in her psychological safety research with work teams. It is very important within teams that are particularly focused on learning that team members will follow through on the work that they say that they are going to do and that the team, as a whole, holds each member responsible for this.

The focus of this team on creating a safe space is what makes them unique. Creating an environment where team members can speak their mind, discuss new ideas, push one another to be accountable is key to this team's success. This type of cultural environment allows for the growth in this initiative because the team owns their own work without the influence from management or the board. Their culture of interaction is robust and supports the development of new ideas and team collaboration that is celebrated.

Signs of Success

Another characteristic identified by the QI team as a core element in their interaction is their ability to note signs of success in the work that they do together. QI work can involve a disproportionate amount of failure (Swensson et al., 2015). On occasion, an attempted PDSA process can fail multiple times before the team can land on the right approach to address a perceived inefficiency. This could be because of misperception, inadequate data, or a lack of understanding about what is causing the inefficiency. It then becomes crucial that the team is able to view this kind of work in a

positive light. Signs of success for this team have to include elements other than successful implementation of the work which can sometimes be a long time in coming or require numerous attempts. This team has been able to create signs of success through making the work a positive experience in their approach to the work, using competition as a motivator and feeling like they have the right tools to do the purposed work.

The NFCHC QI team looks at the work they are doing is a positive experience regardless of whether it is quickly successful. Team members often refer to the work as a chance to use their brains differently. Most QI team members spend the majority of their days delivering primary care to complex patients. QI work gives them a chance to look at their work processes outside their busy days. The QI team discovered through several work initiatives that competition can be harnessed as motivation. Some of the QI work that needs to be completed is based on agreements that are set out by the LHIN and include service delivery statistics for a variety of health screenings. The performance for the organization can be drilled down to see the performance of each individual provider at the CHC. Although management was initially hesitant, the team wanted to post their individual results in a public place on a monthly basis. These charts have spawned a friendly, but competitive, nature within the team and the performance of the organization, as a whole, has dramatically improved. The team has used this competition to create signs of success for themselves.

One of the crucial things that the outside expert brought to this team was the right tools so they felt well-resourced to do the work. Understanding the basic theory of QI, including how to build an effective PDSA, has given this team confidence in their ability to do the work they have been charged with.

Collaborative Environment

Healthcare teams have been the focus of a great deal of research in the last several decades. The research points to better outcomes, processes and patient

satisfaction in environments that effectively use teams (Kilgore & Langford, 2009; Fewster-Thuente&Velsor-Friedrich, 2008). Some researchers believe that well-functioning teams are the best approach to addressing the most complex tasks in healthcare including improving patient care and patient safety (Youngwerth& Twaddle, 2011). QI at NFCHC is a team exercise where numerous disciplines need to work together to successfully implement change. Cohesiveness or how connected team members feel to one another is yet another factor that adds to a team's ability to implement good work process and needed changes to those processes (CHSRF, 2006).The NFCHC QI team is a good example of this research and has identified four elements within their teamwork that has led to their perceived success. These elements are that it is multidisciplinary, inclusive, owned by the team and patient centred.

CHCs were designed around a multidisciplinary team approach to primary care and, therefore, CHC teams are quickly acclimatized to the team functionality for working on problems collectively with a view to hear from all disciplines. Research on primary care teaming may provide insight into why the NFCHC QI team has managed to create a positive working environment in their interdisciplinary approach to improvement. Primary care teams are often much smaller than those in large scale care systems meaning that employees in primary care teams have the opportunity to develop more connected relationships that can lead to positive outcomes for both process and patients (Craigie & Hobbs, 2004).

The second subtheme of collaboration identified by the QI team at NFCHC is that it is open and inclusive. Interest in the work is what drives that engagement of the team members. All new staff members are introduced to the QI work as part of their orientation to the organization. Individuals that show an interest in the work are invited to participate as an ongoing team member. Other staff members are also welcome to make suggestions to the QI team concerning ideas that they would like addressed and all staff

are invited to participate in the improvement process when appropriate. Owning the process is the third subtheme that is characteristic of this team. Much of the hospital QI research data shows that this type of improvement work often comes in a top down approach (McFadden, Henagan&Gowen, 2009). This means that projects the healthcare teams are working on in hospital settings are priorities that are not set by the individuals that are expected to implement the changes in work flow and outputs. This can easily lead to a resentment or disengagement from the process by the teams that are doing the work. The opposite is true of QI work at NFCHC. With the exception of predetermined targets set by the funders, the attempts at internal efficiencies at NFCHC are all generated by the team members themselves. They identify issues of concern and brainstorm on how they will proceed with tackling the plan of improvement.

The final subtheme that emerged from the area of collaboration is that the team as a whole is focused on patient care as a priority. It could be easy to look only at improvement that simplified the work of the team and made their own day to day work easier to do. However, the NFCHC QI team has a focus on improving outcomes for patients. In 2016, they included health equity work in their QIP plan that will require them to look into specific barriers for some women when it comes to receiving their regular cancer screening tests. This will actually add to the workload of the clinical team. However, it shows an impressive commitment to better care for patients. The vision statement of the NFCHC is, “empowering individuals, creating a stronger community through quality care.” A team member describes this element of the team this way, “I think that most of us really believe our vision statement, so I think most of the people really want to do best by patients.”

The NFCHC QI team is a good example of the qualitative research that suggests that primary care teams have to be sustained at a cohesive level if they are to function at a high level requiring regular professional activity that includes regular meeting times,

connectedness through team building exercises and a sense of support for one another personally (Brown et al., 2010). These are the elements that this particular team identified as elements that made them successful.

Implication for Practice

What has become clear in researching this particular case study is that the success of this team's accomplishment is not about the fact that they were implementing QI. There are several initiatives they could have been implementing with similar success. The fact is that all HSOs are ultimately responsible for implementing the changing mandates of the macro level health system, regardless of the quality of the mandate itself. As part of the meso level of leadership, I have the responsibility to translate those mandates into measurable outcomes within my organization. Good leadership can assist their teams to implement these high level mandates while fulfilling their sense of vocation within day to day service delivery. In fact, it is the responsibility of the management structure to take in high level mandates and filter them down to practical steps that can be implemented by the frontline in an easy, but more importantly, in a way that brings value to the day to day work. It is not necessary for the frontline to understand the broad theoretical implications of system change, but rather be able to grasp and implement the parts that improve their practice. The research in this study identified on a micro system level the ways in which this team fulfills their vocation daily by using QI.

Is QI the answer to an improved health care system? From the point of view of the meso level of management, there is no particular reason to believe that this is the case. From my position within the meso level of this system, I have no influence on how the health system evolves. Moreover, dwelling on the value of a given mandate is actually counter-productive. Devoting time and resources to discerning this value actually impedes my ability to lead my team effectively. The sense of urgency that Kotter

speaks of fuels change in the Ontario health system, but this urgency flows from the macro to the micro, and not micro to the macro. Each level in this change system pushes the drivers to the level below, but the micro need not understand the meso, and the meso need not understand the macro. It is in fact better if they don't. There is neither the time nor the resources to be concerned with how well the level above is performing their function.

The research shows that the NFCHC team pays little attention to how I do my job beyond supporting their daily work. They have little interest in the management level questions, because their interest is directed toward their own work. This is ultimately a good thing; it is why they are good at their jobs. Recalling Edmonson's psychological safety, the staff must trust that their management is acting in their best interests. Management's job is to give them what they need to work in an environment that demands this idea of QI. As a good leader, I find ways to make this meaningful in their work, because that is just good management.

If QI is to be evaluated as a provincial mandate, one of the criteria must be: how well can this mandated initiative be translated by the management of HSOs to their staff in such a way that the staff, those who actually care for the patients can see the initiative as something that enhances their ability to live out their vocation. A good manager cannot focus on the flaws of the initiative, and would do well not to even dwell on those flaws.

Chapter 6 - Conclusion

This study is the first of its kind to explore the characteristics of the successful implementation of the QI program in a primary care setting in a CHC. The NFCHC used the provincial mandate to springboard an implementation of quality improvement into their setting and to create a QI team that has been able to demonstrate an increase in quality measures in their clinical practice while, at the same time, creating a positive work environment that embraces QI as a strategy to push their work environment toward efficiency.

While the leadership team and the individual team members were able to identify common elements that influenced the team's success with QI, these findings can be better understood through the lens of Bronfenbrenner's Ecological Model of Development. The model is able to show top level macro influences on the team that are non-negotiable and pushed the team to address QI. Within this landscape, the meso influence of the leadership team of NFCHC used a number of theoretical approaches to influence the team's development. Finally, the micro influences within the QI team also affect how they create success in the daily work of implementing QI in the NFCHC clinical practice.

However, the themes identified through the interviews are very specific to this single case study. Ultimately, the transferable observation from the study is that there needs to be an initial mandate for change at a macro level that is filtered through a supportive leadership where a micro team can identify what it feels that it needs to be successful and feel assured that it can manage to produce and deliver on those elements. Further study would need to be done with other teams to see if this type of ecological development holds true in other environments of primary care.

Limitations

There were three main limitations to this study that include a small, specific interview sample, data collection method and researcher reflexivity.

Interview Sample

The first limitation was the small interview sample. NFCHC is a relatively new organization and has a comparatively small staff at 26 members compared to some of its counterparts that have existed for much longer and have, in some cases, more than 100 staff members. This means that the QI team is small at six members. However, it should be noted that, proportionally, NFCHC's team is more representative of the whole staff at the QI table than other larger organizations. Ideally, all of the team members would have been interviewed for this project, but due to an unforeseen medical leave, one member was unavailable for an interview during the data collection stage preventing input from all of the team.

As a single case study, the data collected is particular to this one team. While there can be implications drawn from this one case to other similar teams (Yin 2009), it does not ensure that the findings are completely transferable to another situation.

Data Collection Method

The second limitation for this study is the data collection. Individual interviews were the primary data collection method for this study. There are inherent issues with personal interviews as a form of data collection. First, the responses to the interview questions may be influenced by perception and/or personal bias. This team had previously been identified for their success by their peers and have embraced this label. Therefore, their responses may have been biased around this factor.

Additionally, by only interviewing one team the results are limited to the specific experience of one team. With a wider scope, feedback from several teams may have provided a broader perspective on successful implementation.

Researcher Reflexivity

As a qualitative study, it was important to attempt to capture my own observations of this team as part of their leadership structure. My role offers a unique perspective of the team and can address NFCHC leadership's approach to making changes within the organization that include implementing QI. However, there can be a perceived issue with power. Holding a leadership position while at the same time being the primary researcher on this project could create an issue around power and how my position might impact the feedback from the team. I have a positive relationship with this team and they did not object to my involvement in the research collection. However, assessing the issue of power and if there is impact on the outcomes in this research project is difficult to calculate. Ultimately, to address this issue, the decision was made to have an outside person do the interviews with the team. This addressed a further concern of my own that included familiarity with the team. I know the story of this team well and I was concerned that in interviewing them myself, I might automatically fill in gaps in their feedback. This might mean that I would fail to ask good follow up questions because I felt that I already knew the answers. I was also concerned that team members may not be as descriptive with their details since they might feel that I already knew them. The hope was that with an outside interviewer the team members might be more descriptive with their explanations and an outsider could ask better follow up questions that led to better detail in the interview process.

Implications for Research

This study has several implications for research and for other QI teams in CHC settings in Ontario who want to successfully implement QI initiatives within their organizations. This research project creates a baseline of data that could be built upon in future research that focuses on QI in primary care. Although there is a large overarching provincial mandate for the implementation of QI in primary care settings, there is no

direction on how to implement or perform that work. This study attempts to provide initial direction to leaders/managers and QI leads who are interested in creating successful QI work environments in primary care within the microsystem of their individual QI teams.

This direction includes a macro level sector mandate to jump start the work. This would apply to other primary care models in Ontario who exist currently under the same mandate to implement QI or primary care models across Canada where there is ongoing discussion about implementing quality into the health system. It should be noted that there is yet a broader context outside of the macro level health care system that impacts the pressure for such health organizations to engage in quality improvement. This includes the federal political environment, worldwide research agendas, cost effectiveness and the burden of disease.

Next, a successful QI team should exist in a mesosystem of management that is characterized by two significant elements that include: (1) supporting the team by adequately resourcing them for the work; (2) embracing change within the organization that includes embracing failure as a learning mechanism. Additionally, the management structure should be able to harness the four elements of change management outlined by theorist, John Kotter which include: bringing in experts from outside, working with a daily sense of urgency, creating opportunity out of crisis and weeding out the staff that affects the work negatively. Additionally, the management needs to be able to take broad macro level mandates and filter them for the teams they lead by bracketing out the elements that are not directly pertinent to day to day service delivery. By doing this management frees their frontline staff to focus on improving their day to day work without the worry of elements that do not pertain to this work.

Finally, the microsystem of the QI team should have the following three elements to encourage their success: (1) providing safe work spaces by managing staff with a focus toward supporting psychological safety within the broader organization that allows

for open, supportive communication; (2) allowing for signs of success in the work where the staff feel like the work is possible and manageable in the long run and; (3) pushing for a collaborative work environment where teamwork is highly valued and there is equity among the people doing the work. If these three ecosystems exist around a primary CHC QI team this research suggests that there should be signs of success with implementing a QI initiative.

Recommendations for Successful QI Implementation

The outcome of this study leads to several specific strategies that could aid in the successful adoption of a QI initiative in a primary care practice setting. The following table outlines the theme identified from the ecological model breakdown and the specific strategy that can be used at each level. It is important to remember that all of these strategies should be used within a strong sense of urgency that is initiated by the high level macrosystem that will then filter down to the frontline of service delivery.

Table 2
Recommendations

Theme	Required for Successful QI Implementation
Supportive Management <ol style="list-style-type: none"> 1. Hire an Expert 2. Give Dedicated Time 	<ul style="list-style-type: none"> • Embrace failure as a learning opportunity • Filter high level mandates into practical and achievable frontline goals • Adopt Kotter's step of inviting outside expertise into the organization • Focus attention on QI to signify its importance to the organization
Safe Spaces <ol style="list-style-type: none"> 1. Communication 2. Big Picture Thinking 3. Accountability 	<ul style="list-style-type: none"> • Remove unsupportive staff from the initiative • Focus of broader organization culture by providing autonomy to staff in how they get the work done • Listen to the concerns of staff
Ability to Embrace Collective Change <ol style="list-style-type: none"> 1. Pressure to Perform 2. Value Adoption 3. Data Driven 	<ul style="list-style-type: none"> • Support effort of staff to make the work equitable across the team where every voice has an equal say • Encourage all works that embracing a team approach • Create an internal sense of urgency
Signs of Success <ol style="list-style-type: none"> 1. Positive Experience 2. Competition as Motivation 3. Right Tools 	<ul style="list-style-type: none"> • Support the visual reminders of progress and success or Schein's Artifacts of culture such as the monthly statistics of provider achievement
Collaborative Environment <ol style="list-style-type: none"> 1. Multidisciplinary 2. Inclusive/Open 3. Owning the process 4. Patient Care as priority 	<ul style="list-style-type: none"> • Allow the team to own the work. This initiative is completely staff driven where they set their own work agenda and choose all of their own goals and projects without input from the broader leadership structure

Future Directions

This study lays the groundwork for further study in several directions. With papers such as *Patient First* coming from the provincial healthcare leadership, there will be increased attention on the provincial primary health care delivery system. CHC's are currently the only model of primary care under the direct supervision of the provincial LHIN system. This project was also only based on one CHC team. Given that QI is a provincial wide mandate, further research could be done on a much broader sample of CHCs to investigate how the sector is address the issue of QI differently. As time passes, further study could also be done to see where CHCs are failing and succeeding with their QIPs. The other care models such as Family Health Teams are also required to submit QIPs for their primary care improvement strategies. A comparison between the models and their relative levels of successful implementation could prove fruitful in the exploration of QI in primary care models as well.

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Appendix A – Acronyms

AOHC – Association of Ontario Health Centres
CCAC – Community Care Access Centre
CHC – Community Health Centre
ECFAA – Excellent Care for All Act
EMR – Electronic Medical Record
FHT – Family Health Team
HNHB LHIN – Hamilton, Niagara, Haldimand Brant Local Health Integrated Network
HQO – Health Quality Ontario
IOM – Institute of Medicine
LHIN – Local Health Integration Networks
MOHLTC – Ministry of Health and Long Term Care
MSAA – Multi-Sector Accountability Agreement
NFCHC – Niagara Falls Community Health Centre
NHS – Nation Health Service
NHS – Niagara Health System
PDSA – Plan, Do, Study, Act
PH - Public Health
QI – Quality Improvement
QIP – Quality Improvement Plan

Appendix B – Letter of Invitation

[insert date]

Title of Study: The Making of a Quality Improvement team in a Community Health Centre: What does it take?

Principal Investigator: Dr. Madelyn Law, Associate Professor, Community Health Sciences, Brock University

Student Principal Investigator: Mrs. Laura Blundell, Masters Student, Community Health Sciences, Brock University

Dear [Participants Name],

I would like to invite you to participate in our study entitled The Making of a Quality Improvement team in a Community Health Centre: What does it take? The purpose of the study is to investigate factors that influence that effective adoption of quality improvement practice of primary care teams in community health centres. You are receiving this invitation because you are a member of the Niagara Falls Community Health Centre Quality Improvement Team. Should you choose to participate you will be asked to participate in an individual interview that should last for approximately 45 minutes and will be audio recorded. In addition there will be personal observations from the researcher during designated quality improvement committee meetings and organizational document review of both the NFCHC strategic plan and quality improvement plans.

This study will be used to explore and identify the factors that have led to your team's success with quality improvement implementation in your organization. Please review the attached letter of consent which will explain the process in more detail.

Thank you for your consideration! If you have any questions about the process, please feel free to contact me or Ms. Laura Blundell at the contact information provide below.

Thank you

Madelyn Law, PhD.

Assistant Professor, Community Health Sciences
Brock University

mlaw@brocku.ca

(905) 688 -5550 ext 5386

Ms. Laura Blundell

Masters Student, Community Health Sciences

lb14ye@brocku.ca

Appendix C - Letter of Consent

[insert date]

Project Title: The Making of a Quality Improvement Team in a Community Health Centre: What does it take?

Principal Investigator: Dr. Madelyn Law, Assistant Professor, Department of Community Health Sciences, Brock University

Student Principal Investigator: Ms. Laura Blundell, Master Student, Department of Community Health Sciences, Brock University

I, Dr. Madelyn Law, Principal Investigator and Ms. Laura Blundell, Student Principal Investigator, from the Department of Community Health Sciences, Brock University, invite you to participate in a research project entitled The Making of a Quality Improvement Team in a Community Health Centre: What does it take?

The purpose of the study is to investigate the various factors that lead to successful implementation of quality improvement practice in primary care. This will be done through a series of interviews with the quality improvement team within your organization along with personal observations from the researcher during quality improvement committee meetings and organizational document review of both the NFCHC strategic plan and quality improvement plans from the previous four years. The interviews will gather information from team members and leadership about your perspective on elements that assist your team with quality improvement practice. Researcher personal observation will include agenda items, room set-up, facial expressions, non-verbal interactions and unexpected interactions, but will not include any personal identifiers during collection or reporting in the study results

Should you choose to participate, you will be asked to participate in an individual interview at the location of your choosing that will take approximately **45 minutes** of your time. The interview will be conducted by myself, Dr. Madelyn Law and will be audio recorded. Once your interview has been transcribed, you will be given the opportunity to review that transcript to confirm the accuracy of our conversation and to add or clarify any points that you wish. You will also be able remove any of the information you are not comfortable with prior to data analysis. There is an expected 2 hours time commitment to review the transcript and transcripts will be expected to be returned within a one week time period. If a transcript is not returned, it will not be included in the research analysis and the original written document will be shredded through secure means. Before agreeing, if you have any questions, you may email myself, Madelyn Law, or Mrs. Blundell at the contact information below.

Participation Benefits

Possible benefits of participation include a better understanding of the factors that influence the implementation of quality improvement in the NFCHC primary care team.

Risks and discomforts

There is a risk around confidentiality by participating in this study. The community health centre field is small in the Niagara region and NFCHC will be identified in this study. Therefore, even though you will only be identified by job title in the study, your personal identity could be exposed. By signing this consent form, you are agreeing to participate despite this risk. Although individual names will not be shared, disclosing the location (NFCHC) and job titles means confidentiality cannot be guaranteed and it is possible that others may know who participated in this study. Knowing who participated might also bring about social risks for individuals.

Voluntary nature of the study

Although the student investigator is employed by the NFCHC, there should be no feeling of obligation or pressure to participate. Participating in this study is completely voluntary and participants will not receive compensation for their participation in this study. You may withdraw from the study at any time. You are able to refuse to answer any or all of the questions in the interview and may refuse to continue with the interview once you have begun. In the event of withdrawal your data will be confidentially destroyed in a secure manner.

Confidentiality

All information provided is considered confidential. To keep your information safe, the researchers will store the data on a password protected research computer. All audio recordings will be destroyed once there is a written transcript. Any hard copies of the data will be stored in a secure filing cabinet in Dr. Madelyn Law's research office. The interview transcripts will be archived on a data storage device and stored in a locked cabinet for 7 years as will the hard copies of the interview notes. The data will only be accessible to myself and Ms. Blundell. The data will not be made available to other researchers for other studies following the completion of this research study.

Publication of Results

Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available to the participants and you will receive a letter via email explaining how to access the results of this study upon its completion. The results will also be made available to the NFCHC through the Executive Director.

Contact information

If you have questions about this research, including questions about scheduling, you may contact **Dr. Madelyn Law at 905.688.5550 ext 5386 or mlaw@brocku.ca**

If you have questions about your rights as a research participant, or wish to obtain information, ask questions or discuss any concerns about this study with someone other than the researcher(s), please contact Brock University Research Ethics Board, 905.688.5550 ext 3035, or reb@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.

Madelyn Law, PhD.
Assistant Professor, Principal Investigator
Health Sciences
(905) 688-5550 ext. 5386
mlaw@brocku.ca

Laura Blundell
Masters Student, Applied
lb14ye@brocku.ca

This study has been reviewed and received ethics clearance through Brock University's Research Ethics Board: **15-166-Law.**

Consent Form

I agree to participate in this study described above. I have made this decision based on this information I have read in the information-Consent Letter. I have had the opportunity to receive any additional details I wanted about the study and understand that I may ask questions in the future. I understand that I may withdraw this consent at any time.

Name: _____

Signature: _____

Date: _____

Appendix D – Request for Feedback Form

[this will be e-mailed to each participant]]

I would like to thank you for your participation in this study entitled The Making of a Quality Improvement Team in a Community Health Centre: What does it take?

The data collected through interviews will contribute to the scientific community through an enhanced understanding of how primary care teams in community health centres effectively implement quality improvement practice.

Please remember that any data pertaining to you as an individual participant will be kept confidential. Once all the data are collected and analyzed for this project, I plan on sharing this information with the research community through seminars, conferences, presentations, and journal articles. If you are interested in receiving more information regarding the results of this study, or would like a summary of the results, please provide your email address, and when the study is completed, anticipated by August, 2016, I will send you the information. In the meantime, if you have any questions about the study, please do not hesitate to contact me by email or telephone as noted below. As with all Brock University projects involving human participants, this project was reviewed by, and received ethics clearance through the Brock University Research Ethics Board. Should you have any comments or concerns resulting from your participation in this study, please contact the Brock University Research Ethics Officer, Office of Research Ethics, at 1-905-688-5550, ext. 3035 or reb@brocku.ca, File # 15-166

Please fill in your email address below.

Email address: _____

Appendix E

Interview Questions

Individual Focus

- What is your professional role at NFCHC?
- How long have you been a member of the NFCHC QI team?
- Prior to working at NFCHC, what was your experience with Quality Improvement in health care?
- What do you think it is about you as an individual that makes you interested and engaged in QI?

Prompt: How does this affect your interaction with your team members?

- How does QI impact your thinking in your day to day work?
- Please describe your experience of being a QI team member at NFCHC?

Prompt: What works well? What doesn't?

- What characteristics exist within your team that contributes to your experience in working and implementing QI?

Prompt: Personality traits, tools, etc.

- How important are each of these characteristics to the success of the team?

Organizational Focus

- What function does the QI team play within the structure of NFCHC?
- How would you describe the effectiveness of QI at NFCHC? Why?
- Where do you see evidence of QI happening in this organization?

- In your opinion, what organizational values exist within NFCHC that have helped with implementing QI?

Prompt: Are there any policies, tools, or documents that guide QI?

- What do you know about the evolution of QI at NFCHC?
- How does this organization sustain the urgency to keep going with QI?
- What do you know about how quality improvement works in other community health centres? How does NFCHC compare?
- How would you describe this team to an outsider that was interested in quality improvement practice?